The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLII. CHICAGO, ILLINOIS, FEBRUARY 27, 1904. No. 9.

Original Articles.

THE CLASSIFICATION AND DIAGNOSTIC GUIDES OF INTESTINAL OBSTRUCTION.*

H. TUHOLSKE, M.D.

Professor Surgery Medical Department, Washington University; Surgeon to Polyclinic Hospital; Surgeon in Chief of the Jewish Hospital.

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VARIETIES OF ILEUS.

The medical writers of classical antiquity, beginning with Hippocrates, applied the term ileus to pathologic conditions in the abdomen characterized by meteorism, pain, vomiting of bilious feculent matter and interference with the passage of feces and flatus. The essential cause was believed to be inflammation of the intestine or of the peritoneum and *"ex inflammatione resiccatur intestinum et constipatur ut neque flatum neque alimenta transmittat. Venter durus fit et vomit interdum imprimis quidum pituitosa deinde vero biliosa, tandem etiam stercus."*[1] According to Galen, inflammation produces a cessation of peristalsis, absolute constipation, or antiperistalsis with vomiting of fecal matter, or in brief, the disease called ileus. All through the middle ages the influence of the teaching of Hippocrates and Galen remained dominant. With the development of the anatomic school in the fifteenth and sixteenth centuries and the more careful postmortem examinations, varying anatomic conditions were recognized as the causes of ileus; so that at the close of the eighteenth century most forms of intestinal occlusions, as by invagination, compression by abdominal tumors, by pseudoligaments or omental bands, by gallstones and enteroliths, by diverticula of congenital origin and by slits or openings in the mesentery or omentum, were well known to the anatomists and pathologists. But the knowledge of these pathologic conditions failed to make any great impression on the physicians of that period, who saw in these anatomic conditions, not the causes, but accidental results of peritonitis, hardly ever absent in their postmortem examinations, and brought about by antiperistalsis or by a special quantity or quality of gas formation and retention. Ileus qualified by the adjective inflammatorius remained the collective term for the symptoms of the various anatomic conditions of intestinal strangulation and occlusion, all of them essentially of inflammatory origin. It was the zenith of the period of theoretical speculation of the arm-chair philosopher who, without the basis of exact observation, influenced and controlled medical thought and practice. To the ileus inflammatorius was now opposed the ileus nervosus by the neuropathologists, and we read of the ileus spasmodicus, ileus paralyticus, and ileus antiperistalticus, as a result of a pathologic innervation of the intestinal tract. It was only after the first quarter of the last century that the earnest insistence of pathologists, comparing the observations of the postmortem room with bed-side experience, pointed out the causal connection between anatomic findings and clinical symptoms without the injection of fanciful and speculative theories, bringing light into this most confusing subject and making the knowledge so gained available for practical endeavor.

CLASSIFICATION.

The diagnosis of ileus is about as definite of pathologic conditions as is the diagnosis of jaundice or of hematemesis. To get at the varying and divergent pathologic conditions characterized by a combination of symptoms of almost bewildering uniformity, the need of an unobjectionable classification is apparent. We, therefore, speak of first, congenital, and second, of acquired ileus. Congenital ileus offers scarcely a diagnostic difficulty of practical value and requires only casual mention here. Obstruction of the bowels in the new-born most frequently depends on an agenesis of the anus, or upon an atresia of the anus, rectum or colon. The occurrence of atresiæ in certain places of predilection in the ileum, jejunum and duodenum, due to faulty development or fetal peritonitis, is very rare, and still rarer, the occasion for a diagnosis. Acquired ileus may occur from the loss of propelling power in the intestinal musculature, or from a mechanical closure of the canal,[2] hence the division into, first, dynamic or paralytic, and, second, mechanical ileus. Dynamic ileus is the outcome of a paresis or paralysis of a piece of intestine of greater or less extent. It may be the result of inflammation, of mechanical or chemical irritation of the peritoneum, of bacterial infection processes in the intestinal canal not producing peritonitis, but hyperdistension from gas accumulation, or of embolism or thrombosis of the superior mesenteric artery or vein; or, finally, of nerve disturbances, as after anatomic changes in the central nervous system, producing loss of power in the abdominal muscles, interfering with the abdominal press, allowing an accumulation of flatus and fecal matter and producing hyperdistension. In addition, there is a variety of temporary character and one offering no difficulties in the way of differential diagnosis, viz.: reflex paresis after compression of a testicle in the inguinal canal and after operations for hemorrhoids and in hysteria. It might appear that ileus in connection with peritonitis might be omitted from con-

* Read before the St. Louis Surgical Society.

1. Hippocrates: By Kuhne in Ilemssen's Encyclopedia, by Leichtenstern.

2. Schlange: Handbuch der Prac. Chirurgie of Bergman, Mikulicz and Burns.

sideration at this point. It is necessary, though, in an acute case of ileus and peritonitis, to determine whether ileus be the cause or the effect of the peritonitis and, if the latter, what is the cause of the peritonitis. Mechanical and chemical irritation are unquestionably the causes of dynamic ileus; it is not rare after extensive operations about the mesentery, after operations in which raw surfaces of the peritoneum remain and after a vigorous toilet of the peritoneum; it was frequent during the period of antiseptic abdominal surgery under carbolic spray and the use of antiseptics in the peritoneal cavity. There occurred distension of the abdomen, meteorism, inability to pass feces or flatus, vomiting and restlessness without pain or tenderness on pressure, without peritonitis, the condition well described as "peritonism." Sometimes hyperdistension in the intestine would produce venous stasis, serous infiltration of the intestinal wall,[3] at last permeability to and infection by the colon bacillus, when the whole dire picture of peritonitis would follow. More often ileus was arrested before it reached that stage.[4]

Ileus, the result of embolism of the superior mesenteric artery, is rare; comparatively few cases have been carefully observed and reported. This may excuse my inserting here a case in my own care three years ago.

History.—Physician, well nourished, aged 50, seen in consultation four days after occurrence of attack, had been a generous liver, had suffered many attacks of abdominal pain after indiscretions in diet; but believed he had never had appendicitis. He had been afflicted with inflammatory rheumatism and had recovered from last attack four weeks ago. He was taken four days ago with pain in the abdomen, severest about the umbilicus, accompanied by great prostration amounting to shock, and by vomiting. He was relieved by hypodermic injection of one-fourth grain of morphia; was better next day, but suffered an uncomfortable distension of his bowels, thought to be due to the morphia. Distension increased; patient took laxative without effect; at the end of the second day there was more vomiting and no flatus or stool. Temperature 99 F., pulse 110. On the third day the patient was rapidly getting worse; he had a large foul passage from bowel consisting entirely of black, tarry, putrid-smelling blood. Distension was greater and vomiting more frequent; abdomen tender on the left side.

Examination.—I found the pulse 120 to 130, temperature 101 F., pulse feeble and small, face pale, and anxious and clammy, barrel-shaped distension of the abdomen with well-marked dulness in the left side and considerable resistance; urine scanty, containing indican; heart sounds weak and mitral bruit.

Diagnosis.—Obstruction of the bowel. Because of the firm, well-marked swelling on the left side, we thought of volvulus of the sigmoid colon, of intussusception, or of embolism of the superior mesenteric artery. In the absence of straining at stool and of frequent bloody and mucous discharges, invagination discarded; patient being able to hold 2½ quarts of fluid injection, sigmoid torsion was thought impossible, hence the probable diagnosis of embolism of the superior mesenteric artery. Patient was made acquainted with the probable diagnosis.

Operation.—A laparotomy was done the same evening. Incision in and through the left semilunar line over the swelling. Very foul, bloody, serous discharge escaped on opening the peritoneum, and the involved bowel at once presented. A piece of ileum, rather more than three feet in length, dark brown, blackish in color, sodden, rigid and friable, was drawn out of the cavity; resected, and both ends fastened to parietal wound. Patient returned to bed, regained consciousness, though pulseless; never reacted. Death eight hours after operation.

3. Schlange: Grenzgebiete.
4. Felix Lejars: Emergency operations.

Postmortem.—Examination showed embolus one and a half inches long in the superior mesenteric artery, and intestinal infarction of great extent. No other cause of obstruction; heart showed mitral insufficiency, and some fresh vegetations on valves. This was, therefore, an undoubted case of dynamic ileus due to embolism of the superior mesenteric artery.

For the elucidation of the interesting question, why after embolism of the superior mesenteric artery there occurs infarction of the intestine and gangrene when there exists apparently such complete collateral arterial circulation, I wish to quote from an interesting paper by Deckart.[5] The pathologic findings, after sudden closure of the superior mesenteric artery, were in all cases, except in three by Virchow, Karcher and Chene, hemorrhagic infarction of the section of intestine depending for its blood supply on the superior mesenteric artery, i. e., from the lower end of the duodenum to the colon transversum. Cohnheim, who took much interest in the question, could offer no satisfactory explanation, since the superior mesenteric artery is no anatomic end artery and its free arterial anastomoses show clearly in the normal mesentery. He, therefore, believed that such infarction of the intestine could only result if not only the trunk or larger branches, but the smallest branches be closed; in other words, unless the mesenteric artery has been first transformed into an end artery. He thought this at the time of the case of Ponfick, in which smaller particles from the embolus had plugged a great many smaller branches. This explanation is insufficient, since infarction occurs in cases in which the smaller arteries remain entirely unobstructed. The question was solved theoretically and experimentally, by Faber and Litten. Faber pointed out the very long distance which the blood in the collateral routes would have to traverse; the infarction is complete before that can be accomplished. The correctness of his supposition was proved by the experiments of Litten on animals. From the moment of the ligation of the superior mesenteric artery all circulation in the territory supplied by it was arrested and could not by any means be re-established. The pressure in the peripheral arteries was equal to zero; it behaved, therefore, like an end artery, and after its closure infarction of the intestine followed the reflux of the venous blood. Other points of interest in this article merit its careful perusal; also that of Borseky,[6] and that of Lillington.[7]

THE CLASSIFICATION COMMON IN THE TEXT-BOOKS.

The classification of mechanical ileus on an anatomic and clinical basis is the usual one and one which recurs in most text-books, whether treated of in works on surgery or on internal medicine. Let me select for illustration from some of the best sources. Leichtenstern[8] in his classical and exhaustive treatise in Ziemssen's Encyclopedia, gives us the following:

The anatomic basis of occlusion or narrowing of the intestinal canal. *First*, causes which by pressure from without close the lumen, and to this belongs incarceration of the intestine in openings or slits, normal or acquired, in the omentum and the mesentery, and the foeces for internal hernia, strangulations by pseudoligaments, appendix and Meckel's diverticulum, compression by tumors, by the mesentery and dislodged viscera. We count here also torsion and knottings, since occlusion is here produced by pressure which the intestinal loops exercise on each other. *Second*, causes which pro-

5. Deckart: Grenzgebiete der Med. u. Chirurgie, 1900.
6. Borsoky: Beitrage z. clin. Chirur., vol. xxxi, parts 3 and 4.
7. Lillington: Lancet, May, 1902.
8. Leichtenstern: Ziemssen's Encyclopedia.

duce obstruction of the lumen by plugging: (a) Causes which are not in continuity with the intestinal wall, as gallstone, enteroliths, foreign bodies and fecal masses. (b) Causes which are in continuity with the intestinal wall, spread and obturate, as neoplasms. (c) Obturation by the intestine itself, as invagination. *Third*, causes which originate in the intestinal wall, or affect them by narrowing of the lumen in ring form, or by angulation or traction, as strictures and flexions; to it belong those originating in chronic peritonitis, the cicatricial stenoses and neoplasms, by infiltrating and contracting the intestinal wall. On the clinical basis: *First*, symptoms of total and complete occlusions and the symptoms of partially impeded permeability, and under this heading, causes which produce acute occlusion sudden, total and complete, to which belong incarceration, strangulation, torsion, sometimes gallstones. *Secondly*, those which are acute, but do not produce total occlusion at once, but which later result in it, as intussusception, incarcerations and acute incomplete compressions. *Finally*, causes which originate slowly and, as a rule, produce symptoms of disturbed permeability for a longer time until there occurs a sudden occlusion, or without it, peritonitis and perforation, and to this belong the causes by stenoses, by strictures, neoplasms and chronic peritonitis, the compression of gradually growing tumors, and the majority of obturations by stones and fecal impaction.

This very comprehensive classification, logical in its way, lacks in distinctness and, therefore, usefulness, while detracting nothing from the universally acknowledged most authoritative treatise for which it forms the basis.

Clear and concise on the same general plan is the classification of Treves.[9] He says:

The classification of intestinal obstruction is most conveniently founded on the basis of morbid anatomy, and may be tabulated as follows: Strangulations by bands and through apertures; volvulus and intussusception, stricture, obstruction by tumors and foreign substances within the bowel, by pressure of tumors external to the bowel, and by fecal accumulation (page 601). From a clinical point of view, cases of intestinal obstruction may be conveniently divided into three classes: Acute obstruction, chronic obstruction, and cases in which symptoms of acute obstruction supervene on those indicative of chronic obstruction.

A REARRANGED CLASSIFICATION.

The above classification, with which writers in the main agree and which physicians and surgeons use as the basis for diagnostic differentiation, may, in my opinion, be reconstructed in the light of the observations and experiments of latest years, as shown in the writings and experiments of Wahl, Manteufel, Kader, Nothnagel, Senn, Schlange, Zeidler, Deckart and others. The experiments of Kader (as quoted by Zeidler[10]), show that all forms of mechanical ileus may be divided, from an important diagnostic and therapeutic view, into two divisions; into the obstruction due to strangulation, in which the intestine and its mesentery as well are strangulated and the circulation of both intestine and mesentery is interfered with, endangering the vitality of the obstructed section; and into obturation, in which the lumen of the bowel, without involvement of the mesentery, is interfered with and in which the subsequent changes are, in the main, due to stagnation of the intestinal contents. Strangulation of an external hernia may be taken as a paradigm of the first variety. The strangulating agents are of several kinds. Peritoneal adhesions may result in the formation of bands or strings, round, flat, short or long, which may connect one loop of intestine with another, or with the mesentery or parietal peritoneum. Like a band in effect is Meckel's diverticulum, which forms a finger-like projection from the ileum, usually within eighteen inches of the ileocecal valve. The end, though commonly free, may be attached to the abdominal wall near the navel or to the mesentery, and a ring is thus formed through which the bowel may pass.[11] From the end of the appendix and fallopian tubes similar bands may arise. Foramina in the omentum, of congenital origin, splits in the omentum or mesentery, from trauma or in broad peritoneal adhesions, may incarcerate a piece of bowel, as has also been observed, although rarely, in a split of the suspensory ligament of the liver, and in the broad ligament of the uterus. An important contingent is furnished by the herniæ retroperitoneales of Treitz, herniæ into the duodenojejunal, duodenal, pericecal and intersigmoid fossæ and through the foramen of Winslow into the bursa omentalis, as quoted *in extenso* by Rokitansky[12] from Treitz's article.

As in the external, the ileum is most frequently concerned in internal hernias. Much more frequently is the sigmoid colon concerned in a form of strangulation known as volvulus, or axial torsion. According to Rokitansky,[13] a piece of bowel may turn on its own axis and after a half turn the lumen may be occluded, or it may turn around the mesentery as its axis, or its axis may be both mesentery and colon, and finally around this loop another loop may become twisted. A long flexure with a long mesentery, so narrow that the mesenteric ends of the loop are close together, forms a favorable condition for torsion when the dependent loop is filled with feces. Sometimes a violent exertion or shaking is the determining cause. According to the observations of Lawson obturation occurs on a twist on its axis of 180°, strangulation only after 270°. Torsion may occur in the small intestine, with an abnormally long mesentery, very narrow at its root. Such condition may be congenital, or the result of inflammation, or of the fixation of a loop for a long time in an external hernial sac.

OBTURATION.

The clearest forms of obstruction by obturation are those produced by gallstones, intestinal concretions, foreign bodies and fecal impactions. Gallstones, causing obstruction, reach the duodenum or colon from the gallbladder through an opening, the result of adhesions and ulceration. Abercrombie,[14] however, mentions a case where at the postmortem examination of a patient, from whom a gallstone four inches by three and a half inches had been removed from the ileum during life, the common bile duct was still large enough to readily admit his index finger. The gallstone may become fixed in any part of the small intestine, rarely in the middle of the ileum, more frequently in the duodenum and jejunum, most frequently at the lowest part of the ileum, from one to two inches above the ileocecal valve. The reason for this appears to lie in the lessening of the lumen of the ileum as it approaches the cecum and in the fixation of the lowest part of the ileum by a short mesentery. While impaction of a gallstone in the ileum, as a rule, gives rise to most acute symptoms, many cases are recorded where in the colon and rectum, although of such wide difference as to size and structure, likewise threatening symptoms were observed. Sometimes small stones give rise to symptoms of obstruction (in a case of Israel, a

9. Treves: Operative surgery, vol. ii, p. 620.
10. Zeidler: Grenzgebiete der Med. u. Chirurgie, 1900.
11. Osler: Text-book.
12. Rokitansky: From Treitz's article, Pathologic Anatomy, vol. iii.
13. Rokitansky: Vol. iii, p. 188.
14. Abercrombie: By Zeidler.

stone one inch in its greatest diameter), initiated by reflex muscular spasms. Enteroliths are very rare and form gradually in the large intestine; a foreign body forms the nucleus for deposits of phosphate and ammonia-phosphate of lime. Foreign bodies getting into the small intestine most frequently, pass, unless they encounter some stricture or unless, on account of their own contour, they injure the mucous membrane and produce swelling, penetration, etc. Fecal accumulation occurs as the result of habitual obstipation and neglect in patients with mental depression, melancholia, or in imbeciles, or after the use of opium or astringents in supposed diarrhea and dysentery, the result of constipation. This is more frequent in the female.

A prolific cause of obstruction is stricture. Strictures of the intestine are either cicatricial or malignant. The cicatricial are the result of tubercular, syphilitic, dysenteric, stercoraceous, or typhoid ulceration, or are occasionally congenital or form after separation of a gangrenous intussusception, or from lesions following strangulation of the bowels in hernia. The tubercular stricture is most common in the neighborhood of the ileocecal valve, the dysenteric in the colon, the syphilitic in the rectum. The frequency of dysenteric stricture is much overrated, while that of the tubercular much underrated.

Malignant stricture is due to the growth in the bowel of a cylindrical epithelioma, the only primary form of cancer to which the intestine would appear liable (Treves). It produces a tough, ring-like stricture; the outer surface of the gut at the seat of stricture is often sharply constricted, while, in the interior, the growth assumes an annular outline. Sarcoma of the bowel rarely produces obstruction. Schlange[15] cites a case, however, in which symptoms of acute obstruction resulted from a sarcoma growing from a comparatively small pedicle of the submucosa, twisting the bowel and becoming impacted in the pelvis. Adenomatous and polypoid tumors may produce obstruction. An important rôle in the development of obstruction of the bowel is played by the results of chronic or circumscribed peritonitis, in the matting together of the intestines, their kinkings, angulations and flexions. Treves admirably described these often complicated conditions.

INTUSSUSCEPTION.

Intussusception is the most frequent cause of ileus. The general anatomic features need no description in this place. In spite of its importance and frequency, I have placed it last, because in it strangulation and obturation are almost inseparably bound with each other. The condition and behavior of the mesentery determine the picture of strangulation or its absence. Rokitansky says:

> Between the intussusception and the intussuscipiens lies the mesentery belonging to it, folded into a cone, the apex of which is at the fore end of the intussusception and the base at the entrance of the intussusceptum into its sheath. By traction on the intussusceptum this becomes curved with the concavity forward at the mesenteric attachment, and the whole involved loop is drawn toward the vertebral column.

In the invaginated mesentery the signs of interference with its circulation depend on the extent and rapidity of the development of invagination. The acuity of the symptoms is always proportionate to the severity of the strangulation of the mesentery. In the most violent cases the arterial and venous circulation is interrupted and gangrene is the inevitable consequence. The dangers in the acute stages are gangrene and perforation at the neck of the invagination, of the chronic, death from exhaustion and stercoremia. In the rare cases of cure by sloughing, obstruction from cicatricial stenosis threatens the life of the patient later.

According to the site of the invagination we speak of enteric or ileal, of colic, of ileocecal and ileocolic invagination. According to Leichtenstern the ileocecal is by far the most common, 44 per cent.; the enteric, 30 per cent.; the colic, 18 per cent.; the ileocolic, 8 per cent. Wiggins found the frequency of the ileocecal variety as high as 89 per cent in 103 cases. Ileocecal invagination occurs most frequently in children. Seventy per cent. of cases in children are of that variety. Ileal invaginations are most frequent in the adult and are chiefly found in the lower part of the ileum.[16]

SYMPTOMATOLOGY OF ILEUS.

The classical descriptions of the symptoms of acute and chronic obstruction, which abound in our text books, invite repetition or imitation; but by the division of ileus into a dynamic, strangulation and obturation variety, I have created for myself a great difficulty. The old picture does not quite fit. Dynamic ileus shares with the mechanical varieties the cardinal symptoms of interference with the passage of feces and flatus, of meteorism, of vomiting and pain; but it takes cognizance of peritonitis as a cause of ileus, which opens the scene, while in the other it closes it. Furthermore, the dynamic variety embraces forms so temporary and mild, that the paresis of the bowel with its distension and meteorism may disappear before fecal vomiting occurs; while on the other hand, in the most acute form due to embolism of the superior mesenteric artery, the patient may succumb to gangrene and stercoremia before peritonitis is fully developed. An aggravated case of ileus, whether dynamic or mechanical, is characterized by constipation more or less complete, by accumulations from excessive formation and retention of intestinal gases, by pain and vomiting, at first bilious, finally stercoraceous, by prostration, and scanty urine, most generally containing indican.

Of the symptoms above enumerated, perhaps the fecal vomiting and indicanuria deserve further notice. It is now generally accepted that fecal vomiting is not due to antiperistalsis, but to a "running over of the intestinal contents upward" by regurgitation of the stagnant, putrefying, feculent fluids. I can not refrain from considering the question not entirely settled; my own observations and experience and the interesting experiments reviewed in the *Grenzgebiete*, 1902, by Mühsam,[17] leave this particular phenomenon *sub judice*. The condition of the urine in patients with ileus has received much study. Carter called attention to the presence of indican in the urine in intestinal occlusions. According to Taffen, Orthweiler and Nothnagel's experiments, increased indigo secretion requires the presence of sufficient albuminoid material in a state of intense putridity and the absorption of formed indol. The results of these experiments show that the formation of indican began after twenty-four hours and reached its maximum on the third day. It is absent or present in very small quantities in occlusions of the large intestine. In diffuse peritonitis it is generally present in large quantities. With the above named symptoms present no experienced physician or surgeon will find much difficulty in making the diagnosis of obstruction. The difficulties begin when we try to differentiate and to find the underlying anatomic conditions and site. The present postulate insisted on by Wahl requires a diagnosis of the site and the na-

15. Schlange: Handbuch der Practischen Chirurgie.

16. International Syst. of Surgery, p. 864, vol. II.

17. Mühsam: Grenzgebiete der Med. u. Chirurgie, 1902.

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ture of the obstruction. Desirable as this is, it will often be found impossible and this surely, in spite of the careful study of the history and local conditions, when in the later stages peritonitis blurs all signs. A knowledge of the possible anatomic conditions, a careful study of the history of the case and local examination, by palpation, auscultation and percussion will help greatly, especially when we shall feel the cultivation and application of these methods to be as essential and productive of results here as in determining the physical signs of chest conditions. Clinical observations and experiments allow of the recognition of certain modifications of form and motility. In circumscribed peritonitis the affected section becomes distended and paretic; in acute diffuse septic peritonitis the distension may reach the limits of the cavity, the intestinal tract is paralysed and peristalsis abolished. In strangulation the involved loop is paralysed, distended and fixed and the afferent gut, in the first days at least, but little affected. The strangulation agency fixes the loop *in loco*. Distension, with loss of peristalsis, may develop in from four to eight hours; the circulation is seriously compromised. The fixed, distended, paralyzed loop, devoid of peristalsis, produces asymmetry of the abdomen noticeable by inspection. (Zeidler[10]). In obturation, the circulation in the intestinal wall is but little affected in the beginning, since the mesentery is not involved. Dilatation of the proximal intestinal section occurs gradually and peristalsis is often increased above the point of obstruction. There is no fixed paralytic loop. The distal end of the intestine is empty. The recognition of stiffening or peristaltic loops above the point of obstruction is significant of obturation. When, later, peritonitis is added, all peristalsis ceases and the picture becomes obscure.

DIAGNOSIS.

Dynamic Ileus.—The diagnosis of dynamic ileus concerns itself first with the question of peritonitis, and, if peritonitis be found, with its cause. If we find distension and paralysis of the intestine as evidenced by absence of peristalsis and want of contouration of intestinal loops; if the abdomen is tender on pressure and the patient lies on his back afraid to move, the diaphragmatic descent interfered with, and breathing labored, hurried and thoracic; if there be indican in the urine and the urine scanty, the pulse rapid and feeble, the diagnosis of peritonitis is easily made. Temperature is not a reliable diagnostic sign. The answer to the question as to its cause will be reached by inquiring: Was there an appendicitis, a leaky tube, an ulcer in the stomach or duodenum and perforation; was there typhoid fever? The embolic form is dynamic; if the onset was sudden, accompanied by pain and prostration with obstruction to feces and flatus but the discharge of large, putrid, bloody, tarry stools with a demonstrable exudate in the flanks and if endocardial heart lesions can be made out, a probable diagnosis of embolism of the superior mesenteric artery with infarction of the intestine may be arrived at. The varieties of dynamic ileus, due to mechanical and chemical irritation or of nervous origin, will be diagnosed by a careful consideration of the history, by the mild general and generally temporary symptoms, and the absence of fixed, immobile loops of paralyzed intestine and by the absence of much tenderness on pressure.

Strangulation Ileus.—Having in a given case eliminated the probability of paralytic ileus and decided that we are dealing with a mechanical obstruction not congenital, the question of strangulation or obturation presents itself. The paradigm, as mentioned above, of a strangulation is the strangulated external hernia, of a strangulation of the bowel and its mesentery. The picture of strangulation is a striking one. A person, apparently in good health, is suddenly taken with a violent pain in the abdomen, accompanied by collapse, nausea, vomiting. To this is very soon added the urgent desire to relieve the bowel of feces and flatus. There is at once the feeling of serious illness, of great anxiety and restlessness. Unrelieved, these symptoms are joined by that of intestinal distension. The pain generally felt about the navel is not significant of locality; it is infinitely more severe in the thin, highly innervated, small intestine than in the large. The initial vomiting with singultus is reflex and begins with the occurrence of strangulation, and with it also come the signs of collapse, the incarceration collapse, and almost anuria from reduction of the arterial pressure. The vomiting in later stages is due to distension and gas accumulation, the stercoremia to toxic absorption or septic infection after permeability of the intestinal wall has become established. After a few hours, perhaps from eight to twelve, the results of the circulatory interference become noticeable; the strangulated section of bowel becomes distended, fixed and paralyzed, and in favorable subjects, seen early, produces asymmetery of the abdomen and can be made out by inspection and palpation. The afferent loop is not yet appreciably distended; peristalsis may be present. All symptoms increase in severity. To the distension of the strangulated part distension of the proximal loops is added and general greater distension. The efferent intestine has been emptied of fluid and gaseous contents and remains collapsed. To the initial shock, the incarceration shock, after the second day are added symptoms of permeability, due to changed condition of the gut at the point of strangulation, and symptoms of general peritonitis develop; the vomiting increases in frequency and the putrid feculent intestinal contents are emitted by regurgitation. The abdomen is tense and tender on pressure, peristalsis everywhere absent; to the signs of stercoremia are added those of septic infection. With the occurrence of gangrene the pain grows less and the patient enters the stage of lethal collapse. The occurrence of perforation may somewhat modify the latter symptoms. If we add to these local symptoms those of the general condition, the rapid, feeble, compressible pulse, the anxious expression of countenance, the pale or cyanotic color, the sunken eye, the pointed nose, the skin cold, clammy and empty of blood, we get the appalling picture characteristic of the result of sudden strangulation. While from such a picture the diagnosis of strangulation ileus will not be difficult, the anatomic diagnosis of the site and nature of the strangulation will barely be one of probability. During the first day, however, in band or twist strangulation, the fixed, dilated, paralyzed loop will give valuable hints.

Obturation Ileus.—In the main, the general symptoms of obturation bear a great resemblance to those of strangulation; a closer investigation, however, will disclose quite a difference in their character. Let me consider them singly. Vomiting in strangulation is present at the beginning, is initial and reflex; in obturation it is rarely present early; but in later stages, after distension and overfilling of the canal above the point of obstruction, it is always present and soon becomes stercoraceous. This latter symptom is more definite in obturation than in strangulation in which the initial vomiting

empties the canal above the point of obstruction and prevents over-filling to a great extent, and in which death often takes place before an accumulation of foul and putrid masses can occur. Obstruction to the passage of feces and gas, absolute in strangulation, is often incomplete and intermittent in obturation, depending on the character and extent of the obturating cause. The pain in strangulation is severe and continuous from the beginning; in obturation it may be severe but it is of a different character; it is periodical and intermittent and accompanies the peristaltic contractions in the loop proximal to the obstruction; it is of spastic, tetanic character. The incarceration shock, so profound in strangulations, is absent in obturations. The pain may be severe, but the rapid loss of strength and the feeble heart action of strangulation are absent; the pain may continue for days and days, but the heart remains fairly strong; it is only after the appearance of stercoremia and septic infection, that the natural exhaustion due to suffering and sleeplessness and starvation, gives way to collapse. Meteorism is present, but not localized in a loop, as in strangulation. The principal cause of meteorism, according to Kader and others, is to be found in the circulatory disturbance of the affected loop and the immediate disproportion between gas resorption and accumulation. In obturation it accumulates in the canal above the point of obstruction, peristalsis is marked and may indicate the point of obstruction. In the intensity and character of the peristalsis, we find important signs of obstruction, and especially in cases where an acute is grafted on a chronic stenosis, obstruction, etc. In those cases the hypertrophy of the muscularis gives to the contraction a marked character; tetanic rigidity and contouration of stiffened loops visible above the *niveau* of the abdomen.[8] In the not chronic conditions the muscles are soon exhausted and contractions give way to paresis. In the words of Schlange, the peculiarities of obstruction ileus are the absence of the initial, continuous pain, the absence of early collapse; the presence of readily recognizable distended loops with more or less strong peristaltic mobility and the presence of disturbances of any kind, which may show the existence of causal or chronic conditions in the abdomen and especially in the bowels.

DIFFERENTIAL DIAGNOSIS.

I have aimed in the foregoing to present a basis for subdivisions, into which may fit the various important anatomic conditions in a concrete form. Let me then presume that in each case a careful history, especially of previous abdominal conditions, has been elicited, urine, blood and all hernial openings been examined, that a diagnosis of ileus has been made, that congenital and dynamic ileus have been excluded and that the case is one of mechanical ileus of the strangulation variety, and in a fairly early stage. Question, is it due to band or string, volvulus, intussusception, or internal hernia? What local signs can help us? The abdomen is fairly distended, but on inspection and careful palpation we find a loop of the bowel, fixed, distended and paralyzed. The strangulation is then due to a band, diverticulum, volvulus, or invagination. The appendix vermiformis, for our purpose, is practically a diverticle, and a diverticle practically a band. Strangulation due to band is very rare in childhood, patients are generally young adults; in 68 per cent. there is a history of peritonitis and usually the small intestine involved. The onset is sudden, pain early, continuous, incarceration collapse well marked, absolute constipation, stercoraceous vomiting late, no tenesmus, no bloody mucous discharge from the rectum; rectum empty, holds large quantity of injection fluid, distension gradual and central, territory occupied by large intestine empty and collapsed; if the appendix acts as band, the fixed loop is in the right lower abdomen. Volvulus of the sigmoid colon affects most generally an adult between 40 and 60 years, is rare before 40; is four times more common in men than in women; there is a history of chronic constipation; the pain is less severe than in band, collapse less intense; the vomiting later, tenesmus is present in 15 per cent., distension begins on the left side in a loop, which gradually moves upward and to the right hypochondrium; the distended colon can be made out; on examination per rectum we may feel the end of the distended loop in the pelvis or abdomen; the rectum will not hold a quart of fluid. In torsion of small intestine around a mesenteric axis pain is more acute, distension central, large intestine empty and collapsed, will hold quarts of fluid, vomiting early, rarely stercoraceous, no history of peritonitis. Intussusception mostly in the young; 50 per cent. in children under 10 years, onset sudden, pain at first intermittent, vomiting not so early, is less urgent and sometimes absent; there is tenesmus and bloody and mucous discharge from rectum, sausage-shaped tumor generally felt in the abdomen by palpation or the intussusception found in the rectum. There remains the internal herniæ, of which the hernia duodenojejunalis is the most frequent. This is probable in strangulation ileus in the absence of a fixed, immobile, paralyzed loop, with intense thirst, early vomiting, rarely becoming fecal. Quoting again from Leichtenstern:

> I consider probable diagnosis possible under favorable circumstances and with a fairly large hernia. The circumscribed, spherical distension of the mesogastrium, collapse or sinking of the territory occupied by the colon, the palpability of a circumscribed, tense, elastic, spherical mass, which gives the impression of a large, somewhat movable cyst, which tends toward the left from the mesogastrium, the quality of a definable tumor which gives a sonorous percussion sound and on auscultation loud, clear, intestinal noises with bleeding from the rectum and hemorrhoids, from compression of the inferior mesenteric veins, seem to make a fairly clear picture.

Jannesco has collected 64 such cases. Koenig[18] states that of such herniæ, of which 50 are beyond doubt, according to a critical review by Sonnenburg, who operated on one case successfully without having recognized its nature, not one had been diagnosed. The indication was incarceration high up in the small intestine. Those in the fossæ subcecalis or intersigmoideæ are very rare indeed, and have not been found sufficiently often to offer a diagnostic hint beyond strangulation not coming under the described heads. Obstruction ileus having been diagnosed, how may we differentiate its various forms? Obturation may cause symptoms of acute or chronic obstruction; the acute generally grafted upon the chronic, except in gallstone, enteroliths and foreign bodies. Senn's[19] experiments seem to demonstrate that occlusions of the lumen by foreign bodies give rise to symptoms of obstruction after tissue changes have begun in the intestinal wall from contact with the foreign body. While the symptoms in gallstones frequently are very acute, they lack the intensity characteristic of strangulation. The presence and character of foreign bodies, we learn from the history; attacks of gall colic accompanied by severe symptoms or of

18. Koenig: Lehrbuch der speciellen Chirurgie, vol. ii.
19. Senn: Practical Surgery.

jaundice more or less persistent, will indicate the probable nature of the obturation. Acute symptoms of obturation point to enteroliths, after the exclusion of foreign body or gallstone. Occasionally, under exceptionable circumstances, the stone may be felt. Acute symptoms of obstruction by invagination are soon lost in the picture of strangulation, the finding of the tumor, often sausage-shaped, the tenesmus, bloody mucous discharges with the indications from the age of the patient, help to make a correct diagnosis.

THE DIFFERENTIAL DIAGNOSIS OF CHRONIC OBTURATION ILEUS.[20]

The progressive development in the clinical knowledge of enterostenoses may be best appreciated by a study of the works of Leichtenstern, Treves and Nothnagel. In them we find demonstrated the close relation between the motor signs and the chronic development of the impediment. Treves describes graphically the colic attacks, and Nothnagel the rigidity and tetanic contractions of the bowel above the obstruction. The colic attacks are not of a duration as in kidney or gallstone. They are rather like short and periodic labor pains, accompanied or followed by loud splashing, tinkling, purring noises and subjective feeling of turning about or rolling of the intestine. I can not here go more extensively into a detailed study of the subject, but the value of a correct interpretation of the variety, duration and location of the contractions, etc., is indisputable for the differentiation between stenosis of the small and large intestines. Acute attacks of varying intensity appear from time to time. In the intervals, the symptoms of obstruction may subside. In time the intervals become shorter and the attacks longer and finally complete. In fecal impaction vomiting appears late and is never feculent until after a period of complete obstruction; constipation is pronounced, increasing; meteorism gradual; the abdomen feels full and doughy and a tumor can be made out in the colon or rectum. As a rule, it is of a doughy consistency, but may be hard and tender on pressure, in which latter peculiarity it differs from the carcinoma. The greater number of the cases of partial chronic stenoses depends on the development of strictures, malignant and cicatricial. Nothnagel says of 343 cases of carcinoma of the bowel recorded postmortem, 162 were rectal, 164 of the colon, 10 of the ileum, none of the jejunum and 10 of the duodenum. Therefore the large majority are within reach of touch, sight and palpation. Malignant strictures are more common in the large, cicatricial more common in the small intestine. Stricture of tubercular origin is most frequent in the ileocecal division and most frequent in the ileum; those following syphilis and dysentery, in the rectum and colon; cancerous strictures are rare before forty; cicatricial occur earlier in life, often preceded by a history of tuberculosis, dysentery, trauma or strangulated hernia.

Obstruction from compression by tumor or peritoneal exudate and matting together of intestine can generally be determined by a careful physical examination of the abdominal and pelvic cavities, and its character, location and probable influence on the intestine, estimated. Nothnagel says that the anatomic diagnosis of intestinal obstruction is the most difficult of anatomic diagnoses. I entirely agree with him. Nevertheless the attempts toward solving the difficulty should be persistently continued until the goal be reached. When the symptomatology of obstruction of the bowel shall emerge from its chaotic condition, the indications for prompt and correct therapeutic measures will become apparent to the physician, and surgery, stepping in early, will score some great triumphs.

20. Bhedowski: Grenzgebiete der Medicine u. Chirurgie.

REPORT ON TWO OF THE CHILDREN OPERATED ON BY LORENZ.

HARRY M. SHERMAN, A.M., M.D.
Professor of Surgery in the University of California, Surgeon to St. Luke's Hospital, and Orthopedic Surgeon to the Children's Hospital.
SAN FRANCISCO.

In May, 1903, I removed the dressings from two of the children who had been operated on for congenital dislocation of the hip by Professor Lorenz of Vienna, when he was in San Francisco in November, 1902. One of these cases I had seen in November, 1900, but the parents then declined treatment, coming back to San Francisco two years later, however, when they heard of Lorenz. This case returned to me by agreement when the time came for the removal of Lorenz's dressings. The other case was the child of a physician, and had never been seen by me until he was on the operating

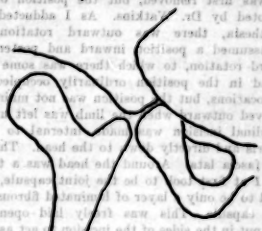

Fig. 1.—Case 1. Outline of upper end of femur and pelvis immediately after the removal of the Lorenz dressing, May 11, 1903. (Reduced from radiograph.)

table, but returned to me, also by agreement, as did the first.

In each instance there were several surgeons present when the splints were removed. The children were radiographed immediately after the splints were off, before any examination was permitted, and this record being thus secured they were examined and such notes as were necessary were made.

Case 1.—A boy, aged 5 years. I had seen this child in November, 1900, and he had then an anterior dislocation. He had a slight limp only. By November, 1902, his condition was worse and Lorenz made an effort to put the head into the acetabulum. The plaster-of-paris dressings put on by Lorenz were worn continuously until taken off in my office. The radiograph (Fig. 1) was taken and the following description was made at my request by Dr. James T. Watkins. It expresses my own findings perfectly, and is given as the joint testimony of Dr. Watkins and myself.

"The plaster dressing applied by Professor Lorenz after he had operated on the 'Case 1' boy in November last for congenital dislocation of the left hip, having been removed, the boy was examined and *x*-rayed without removing him from the table.

"I found the left thigh flexed on the pelvis to about a right angle and abducted till it lay in the frontal plane of the body. Neither outward nor inward rotation was apparent. The leg

was flexed on the thigh but could be extended. In other words, the limb was in the attitude in which it was put in the plaster dressing. There was some atrophy of the muscles of both the leg and the thigh.

"The femoral artery could not be compressed between the finger and femoral head as is normally the case; but the head was recognized external to the artery and more superficially placed than usual in a position beneath the anterior superior iliac spine. The greater trochanter was in a plane posterior to that in which the head lay. It was placed at the level of the acetabulum. Whether or not it lay in the same frontal plane as the acetabulum could not be determined."

The head was in a subcutaneous position in the outer part of Scarpa's triangle, while the trochanter was somewhere behind and internal to it. The condition was not one favorable to any stable support of the pelvis on the femur, and I suggested to the mother the propriety of a cutting operation to try to improve things. This was agreed to, and the child was sent back to the hospital.

The following account is made from notes dictated during the operation:

As the child had been using the limb for about a week I found much greater mobility at the hip than had existed when the splint was first removed, but the position of the head was that noted by Dr. Watkins. As I adducted the limb, under anesthesia, there was outward rotation and the trochanter assumed a position inward and posterior to the head. Inward rotation, to which there was some resistance, put the head in the position ordinarily occupied by it in anterior dislocations, but the position was not maintained and the head moved outward when the limb was left unheld.

A longitudinal incision was made, internal to the tensor vaginæ femoris and directly down to the head. This was just beneath the fascia lata. Around the head was a thin fibrous layer which I at first took to be the joint capsule, but which I later found to be only a layer of laminated fibrous tissue, an adventitious capsule. This was freely laid open and long catgut loops put in the sides of the incision to act as retractors. The cartilage of the femoral head, now exposed, was found to be eroded, as if by some absorptive process. The pit for the ligamentum teres was obvious, but there was no ligament.

Usually at this stage of the operation for reduction by arthrotomy I am able, by flexing the hip to a right angle, to thrust my finger down to, and sometimes through, the constricted part of the capsule, but in this case it was impossible. There was no such open path. Further dissection showed a band of capsule, coming from the lower part of the acetabulum and twisted around behind and above the neck; but partial section of this did not open up the way to the acetabulum. Finally the rim of the acetabulum was located and the capsule opened there. It was then found that the manipulations in November, 1902, had torn the capsule, had thrust the head through the opening and left it among the muscles at the outer part of Scarpa's triangle and just beneath the fascia lata, while the trochanter had been crowded into a position internal and posterior to the head and very nearly into the acetabulum.

The acetabulum, once exposed, was found to be very shallow, but the head was easily put into it, or on it, by an inward rotation movement. Very little capsule, however, was left in front of the head, and this was a serious loss.

The wound was closed in the usual way and the limb and pelvis put in a plaster-of-paris spica, the thigh being flexed, abducted and rotated in so that the pull of all the long muscles of the thigh should crowd it directly against the floor of the acetabulum.

The disclosures of this incision suggest certain thoughts. It is obvious that in all cases in which an anatomic reduction can not be made the body weight must be carried by the capsule of the hip joint. It seems equally obvious that an intact capsule would carry that weight better than one that had been lacerated, and so it is impossible to avoid the conclusion that any manipulation that lacerates and weakens the capsule is a detriment. Now the tendency is for the dislocation ultimately to become a posterior one, even though it is anterior in infancy and childhood. I can see no condition, exposed by this incision, which could be counted on to prevent this backward movement. If the movement took place one would expect the head, entangled in the rent in the capsule, not to move as fast as the trochanter, and an outward rotation of the limb to occur. Furthermore, the rent in the capsule must be on the distal side of the constriction, and the moment it is made, all hope of crowding the head through the constriction and into the acetabulum is lost; moreover, if the head be now put on the acetabulum it is wasted effort, for the proximal part of the capsule is stretched over the acetabular cavity from rim to rim, and not only closes it, but makes the cavity, perhaps originally not deep, still more shallow. There is not room in a normal hip joint for a layer of capsule between the head and acetabulum; there is still less with the parts deformed as they are in congenital dislocation. Just how this boy was benefited by the manipulations of Professor Lorenz, I can not myself see. Of course, it may be said that I robbed him of the possible benefit by doing a

Fig. 2.—Case 2. Immediately after removal of the Lorenz dressing. June 3, 1903.

cutting, "bloody" operation. For this reason Case 2 has not been operated on and can now be studied.

CASE 2.—Boy, 4 years old, with a posterior dislocation of the femur. He was operated on at the same time as was Case 1, by Professor Lorenz at the Children's Hospital. The splint was taken off in my office, June 3, 1903, having been on a little over six months. The same method was followed as in Case 1, and the child was radiographed immediately after being taken from the splint. Palpation showed the femoral head to be in the outer part of Scarpa's triangle and very near to the skin. There was a little active motion, and more passive motion. The child had walked in his splint, but could not do so after the splint's removal. The conditions, on examination, were so similar to those in Case 1 that I presume the same amount of mischief was done, that the capsule had been torn and the head thrust through the rent out into the surrounding muscles, that around it had developed an adventitious thin capsule, and that the untorn portion of the capsule reached up behind the head to the upper part of the neck near the trochanter, while the acetabulum was still closed by the capsule stretched across it, from rim to rim.

Examination of Case 2, October 10, four months after the removal of the splint, and during which time the leg had been in use, shows that the child stands without lordosis; he walks with a little straddle of the legs, and with a turning out of the

foot; at the same time there is a lateral and backward sway of the trunk on the pelvis, lordosing and bending sideways the lumbar spine in each step. The limp was observed by Dr. Watkins and myself, with the child nude and walking to and fro in a good light. It is certainly a definite quantity. The femoral head can be felt to be just outside of the anterior superior iliac spine and above the acetabulum. The trochanter is behind and internal to the head. The neck is, consequently, directed forward and outward and upward, the latter in accordance with its natural obliquity to the shaft. About 1 cm. or

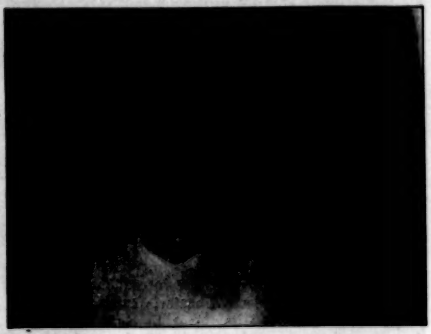

Fig. 3.—Case 2. Showing upper end of femur and the pelvis, the toes held to point forward.

1.5 cm. up-and-down motion is permitted by the head with the limb extended, and when the hip is flexed, the center of motion is at the trochanter and the head travels upward and backward with the flexion. The center of motion is presumably at the point where the probable rent in the capsule embraces the femoral neck, perhaps close to the trochanter, though it seems to be in the trochanter itself. In its present place the head is further from the mesial anteroposterior plane of the body than it would be in either of the ordinary anterior or posterior positions, and this will explain the most obvious lateral sway

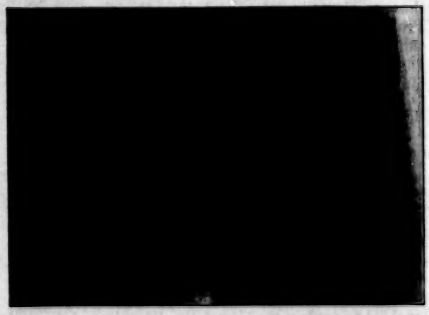

Fig. 4.—Case 2. Showing upper end of femur and pelvis, the leg being permitted to roll outward.

in the step, for the child has to make this motion in order to balance the body over the unstable and eccentric support. The limb is 2.5 cm. shorter than its mate. The parents say they can see no improvement in the walk since the operation. A radiograph (Fig. 2) was taken at this time. It shows shadows which correspond with the clinical findings as described above.

Assuming that the capsule was ruptured in this case, as it surely was in Case 1, and admitting, for it can not be denied, that the body weight has to be carried by the capsule, the shortening of the limb now must be greater than it was before the manipulation; for the capsule now reaches only to the neck, whereas before it reached to the head. I can not state that the limb is shorter, for I never examined the boy before his operation, but I believe it is so. Now, in this position, with the head looking forward and the trochanter backward, the toes point forward and outward. The trochanter is apparently behind and the femoral head just above the acetabulum. If the upper end of the femur travels back to the position on the dorsum, the outward rotation may be increased, with an increase in the awkward position of the foot. This will be of no benefit to the child if it takes place. If it does not take place, the present position and the present eccentric point of support and the semi-waddle it imposes, will last through life. I can not see that this is any improvement on the conditions existing before the operation.

The radiographs show, in Figure 2, the position of the parts when the original splint (Lorenz's) was taken off; in Figure 3 the position which the upper end of the femur takes in relation to the pelvis when the foot is held so that the toes point forward, and in Figure 4 the same when the limb falls into the spontaneous outward rotation position.

TABLE WINES. ARE THEIR USES TO BE ENCOURAGED?*

HENRY O. MARCY, A.M., M.D., LL.D.
BOSTON.

I suppose the preacher of even a lay sermon is expected to select some text more or less befitting the subject of his discourse; therefore, I have chosen I Timothy v, 23, "Drink no longer water, but use a little wine for thy stomach's sake and thine often infirmities."

In these days of biblical exogesis the reverential respect of the fathers has become badly shaken, and with perfect complacency we now revise the revision of the revised word until, like the boy's jackknife, the new handle, fitted to the new blade, is still claimed to be the same old knife.

The first revision was in the earlier day, when the crusaders of the new temperance faith openly absolved allegiance to King Alcohol, and declared that public tippling at the house of the tapster should be abolished. The temperance lecturers dwelt on the evils and the doom of these open enlisted followers of the King, and the pictures of the physical, financial and moral ruin of these men was so graphically depicted that every listener would have had a delirium of nightmare had he not conscientiously believed that the photographic vision was of the "other fellow" and not of himself. These same moral temperance teachers, for the most part, accepted it as orthodox that whisky, brandy, rum, gin, etc., were excellent medicines, and that when the tides of life ran low they were indispensable to tone and brace up the general system.

After having shown that the rôle of these so-called remedial agents was founded in a misconception of a conservative prejudice descended from the fathers, it was asserted, and abundantly proven, that strong alcoholic drinks were injurious as medicines, and rarely if ever to be administered for the good of the patient. Still further revision showed that when these stimulants were taken, even in small doses, but in daily repe-

* Read at the annual meeting of the American Medical Temperance Association at New Orleans, May, 1903.

tition, certain chronic changes of the tissues ensued; that such individuals, although seemingly well, often added unduly to their weight by the lack of elimination of waste material, and that they became subject to certain chronic diseases affecting especially the kidney and liver.

Then it was demonstrated that the resistant power of the organism to disease was lessened. As an illustration, an increased tendency to tuberculosis.

A still more careful analysis of these revisors demonstrated that the experience of the centuries was all wrong; that the witness, who, in January most earnestly testified that he drank alcohol and it warmed him, was considered prejudiced, especially when it was shown in evidence that the same individual claimed that after taking his favorite beverage in July he was cooled thereby.

The physiologist who became a member of this investigating committee, after a prolonged and profound research, showed that the especial monitors—God's sentinels at the inner gate of our consciousness—had been more or less narcotized, and, therefore, did not correctly report the state of the weather. Following this new lead of investigation, it was demonstrated that in perfectly healthy young individuals, selected for the test, moderate doses of alcohol lessened the special senses in an almost uniform ratio, so that vision, hearing, smell, taste, touch, muscular force were all appreciably lessened; therefore, it followed that the endurance and fighting qualities of the soldier and sailor are impaired; that the soldier can not march so far, endure hardship as well or shoot as accurately, and that since each soldier of the United States represents an average annual cost to the government of $1,000, therefore the economics of the equation demanded that as a fighting machine his ability should not be impaired by the taking of alcohol.

The revisors of the revision were even now not satisfied, and by further scientific investigation attempted to prove that alcohol in all its different forms of drink is alcohol still, and that it does not matter whether it represents a weak solution, as ale, beer, cider or light wines. In other words, that an ounce of alcohol taken in a quart of beer or in a pint of light wine is just as injurious as if diluted in the same amount of water; that it is a poison, and exerts its influence on the tissues in a directly relative manner.

Now if this is the modern, scientific explanation of the effect of alcohol on the animal tissues, where will we find the truth of our text as announced by the great Apostles? And why should we not accept the teachings of our fathers, fortified by the experiences of the centuries that the discomforts due to a defective digestive process might be speedily relieved by a dose of hot toddy. Our physiologist says the sensation of discomfort is relieved as by a narcotic, but the digestive process is retarded rather than enhanced by the remedy.

Some scientists stoutly affirm that a small quantity of alcohol may be safely oxidized in the tissues, and have even gone so far as to state that the average healthy adult may thus dispose of two ounces of alcohol in twenty-four hours, transposing it by a process of oxidation into heat units. But the same opinion is carefully qualified by the statement that the temperature of the individual may be more easily and safely maintained by the transposition of ordinary food products.

If this brief résumé of the physiologic effect is correct (and in the support of this opinion it is easy to quote a long array of the best modern scientists), what can be said in favor of the uses of wine as table beverages?

Even from the remotest antiquity, in every generation and among all peoples, the vine has been cultivated and its products held in the highest esteem. Poets have vied with one another in singing its praises, and the grape in its many varieties has justly held a high place in public favor. Inasmuch as it was impossible to supply this fruit in perfection in general use, except for a brief period of the year, it was perfectly natural that some measures should be devised for better preservation, and it was easy to determine that this was not possible, except through the processes of fermentation, which modified their juices, and by the addition of a considerable amount of alcohol under favorable conditions rendered permanent their keeping qualities.

Very modern science has taught the causes which produce in great variety the flavor or bouquet, which renders wines so desirable and causes them to be held in high esteem. The general public has been taught for the most part only the injurious rôle of the bacterium, so that, indeed, it is often stigmatized as deadly. The fine flavors of the high-priced creamery butter are now very commonly produced by the introduction into the cream of a special variety of bacteria cultivated for the purpose. Cheese owes its flavor to certain forms of these organisms, and of more recent demonstration is the proof that in the fermentative process of wine-making certain bacteria may be introduced which produce the much-desired flavors of the high-cost vintage which was supposed hitherto possible to obtain only in certain especially favored cellars.

The wise custodians of these establishments had for many years religiously believed, not alone in the even temperature and dryness of their cellars, but had insisted on the advantage of letting them from year to year remain absolutely uncleaned. In this way certain ferments were readily preserved indefinitely, and were thus accidentally introduced into the ripening wine. Profiting by this, selected varieties of bacteria are now cultivated with the assurance of an annual product of high-grade wines. Thus it is demonstrated that it is not the percentage of alcohol which causes these wines to be so high-priced and much sought after, but something else. And we may well ask ourselves if modern science may not give us this something else in even more desirable form and eliminate the alcohol.

We are all singularly creatures of habit, and become so wedded to certain tastes and flavors that the deprivation of the same is held by the individual as a more or less positive detriment; and this brings us to a subdivision of our subject, to which I can only allude, the so-called flavors, condiments, relishes, etc. The physiologist will tell you that there is a reason why every man requires salt in his daily food, but he will be troubled to explain the almost equally universal demand of the Mexican for the extraordinary use of pepper and of the Italian for garlic.

It would be hardihood on the part of any scientist to advocate the adoption of the universal ration, although he can demonstrate most definitely that a healthy individual of a fixed weight requires certain given amounts of starch, fats and proteids. When we add to these fundamental elements of nutrition the thousand and one various modifications of food, we recognize that we are doing it chiefly for the purpose of making our

daily diet more attractive and giving a better relish for food.

The modern miracle of the preservation and transportation of food stuffs renders it possible to place on our tables in excellent condition the products of all climates at reasonable cost. The banana, a generation ago a rare and expensive tropical fruit, has become of almost daily use, even in homes of those in limited circumstances. Preservation by use of cold storage has worked a wondrous change in the continuous supply of fruits. At a slight increase of expense apples in good condition are abundant in the market for the larger portion of the year. This is also true of oranges and lemons, etc. The strawberry, from its first fruiting in Florida until the end of the season in Nova Scotia, furnishes an abundance of delicious fruit at moderate cost. These are selected as illustrations of the wonderful modern progress which permits the table of those even of limited income to be supplied with healthful accessories to diet which serve as relishes to the appetite rather than absolute necessities for the preservation of existence.

That which is true of fruits is also true of modern beverages, which in a still greater degree are classed as relishes or aids to appetites. Pleasant, refreshing drinks in daily use are made from these fruits, as lemonade, fruit sherbets, etc. Scientific processes are yet to greatly lessen the cost of fruit juices and proportionately wisely increase their use. Modern processes render it perfectly feasible to concentrate the juice of a lemon into a quarter of an ounce of fluid and render its preservation indefinite, thereby reducing the cost to the consumer with equal profit to the grower by three-quarters. That which is true of the lemon is true of many other fruits, especially that of the grape. The large expense of light wines lies in the hitherto necessary bottling and handling of its large factor in bulk, which is only water. By the careful abstraction of water, claret is easily reduced in bulk by three quarters. These condensed wines keep much better and are ready for use by the simple addition of water. This process is already in use in France and has been enthusiastically recommended. The abstraction of the water without damage to the wine, by any of the heat processes, has proven to be impossible since the delicate aroma which is the chief attraction of the wine is thrown off even more rapidly than its alcoholic contents. Although every housewife delights in the preservation of fruits which add so materially to her table delicacies, she is painfully aware that despite her utmost care, a large part of the delicate aroma of the fruit is lost in the heat processes necessary to the preserving.

Somewhat recently advantage has been taken of the fact that the water in fluids submitted to low temperature under favorable conditions became ice crystals, entirely free from admixtures which the fluid contained. Therefore, wines submitted to this process parted with a large share of their bulk without loss of their alcoholic or other essential qualities. Fruit juices submitted to the same process are easily concentrated in the most remarkable degree, and there is every reason to believe that in this way very many additions can be made to our table delicacies. Most delicious beverages which many think are preferable to our most costly wines can be manufactured in this way, preserving without detriment the exquisite flavors and colors of the carefully ripened fruit. That such beverages are beneficial, no one can question, and they may be destined, in a degree at least, to supplant our enormously excessive use of tea, coffee and alcoholic stimulants.

A brief description of the process may be instructive. The fluid to be concentrated is subjected to a temperature below freezing, and the ice crystals as formed are mechanically broken up. The resulting product may be considered an unsweetened fruit sherbet. This is transposed into a centrifugal machine of high power, and the ice crystals are driven out so forcefully that they resemble snow ice, and require breaking up with a hammer. The uncongealed concentrate diminished 60 to 80 per cent. of its original bulk, is ready for preservation. Such a process is not an expensive one and can easily be installed at places convenient of access at the cost of a few hundred dollars.

The quality of the product will necessarily depend on the quality of the fruit used, as defective flavors are as much intensified by concentration as desirable ones. My attention was first called to this process many years ago, in its application by the farmer to late-made cider. He purposely exposed his cider in casks to low temperatures, freezing it as much as possible, then draining off a concentrate reduced to a fifth or even a tenth of the former bulk. The processes as above outlined have passed the experimental stage, so far as the economy of production and quality of product are concerned. Applied to milk, 60 per cent. of its water is easily extracted by a single freezing, its keeping qualities greatly enhanced, so that the family supply of milk can be purchased weekly instead of daily, with immense saving of cost alike to the producer and consumer.

It is not too much to believe that revolution in the drinking habit may be expected with an almost limitless profit to the consumer. In the place of table wines, as now used by the comparative few and now believed to be demonstrated of positive injury when habitually taken, there will be furnished to the many the fresh juices of the grape and other fruits, which, constantly used from youth to old age, will be found healthful and invigorating.

When a man may be better clothed, better housed and better fed, he is no longer satisfied with his former estate. When he may drink freely without being intoxicated, when he may have more delicious drinks which appeal to his appetite without detriment to his physical and moral well being, he will as readily make choice of his new beverages.

Another step in the progress of civilization has been made, and a new era is opened up to him. Modern science is the magic transformer of the centuries.

Reorganisation of Medical Societies.—The project which involves a merger of the county and state medical societies with the national organizations has much in it to commend. Under the new régime, the county society is made the unit and enjoys representation at the state association, which in turn sends delegates to the parent organization. Both of the latter, moreover, are, for convenience sake, divided into legislative and scientific sections which conduct the business pertaining only to their respective departments. All prospective members, therefore, are required to join first their county or district society—which action renders them eligible for membership in either of the others. The advantages accruing from an amalgamation of all or most medical associations of the United States is apparent to all and the last obstacle in the way of such advance was removed by the national body when the "code of ethics" was abolished and gave place to the "principles of ethics" which are merely advisory and suggestive and place no undue restrictions.—*New England Medical Monthly.*

THE DECAPSULATION OF THE KIDNEY,

WITH REFERENCE TO THE CONCOMITANT INTRA-OCULAR COMPLICATIONS IN THE CHRONIC FORMS NEPHRITIS.*

GEORGE F. SUKER, M.D.

Professor of Ophthalmology in the Post-Graduate Medical School; Clinical Instructor in Ophthalmology in the Medical Department of the University of Illinois.

CHICAGO.

The object of this paper is to elicit the interest of the members of this Section in determining whether or not the decapsulation of the kidney can be accepted as a curative or as a palliative measure for the various intra-ocular complications accompanying either the diffuse, interstitial or chronic parenchymatous nephritis. The question of decapsulating the kidney[1] still attracts considerable attention,[2] not only from the standpoint of the surgeon but from that of the internist as well. The writer is well aware of the fact that it is rather early to make any definite statements or draw any definite conclusions as to the merits or demerits of the operation from an ophthalmologic point of view.[3] But, if the paper should arouse enough interest in the matter so that before long we might have either a symposium or a more extended report on this subject, as is our wont in such matters, we would be in a position to decide a very important question which would be infinite in its reachings. In this particular, it is only necessary to call attention to the tremendous death rate in those forms of subacute or chronic nephritis associated with deep-seated fundus lesions, especially albuminuric retinitis.

The surgery on encapsulated organs, such as the kidney, liver and spleen, is of recent origin. The pioneers in this field are Reginald Harrison of England, Israel of Berlin, Pean and Pousson of France, Ferguson of Chicago, and Edebohls of New York. It is to be hoped, however, that with reference to the decapsulation of the kidney it will not be as it was with the splitting of the capsule of Glisson, namely, a nice experimental operation but of no practical value, as its results are not definite.

It was Edebohls[4] of New York who first split the renal capsule with the avowed intention of curing a case of chronic interstitial nephritis. Since then, a number of surgeons have performed the operation. However, no mention at all was made in most instances of the condition of the eye at the time of the operation, nor, for that matter, at a subsequent time. It is sad, but nevertheless true, that the general surgeon pays very little attention to the eye when it comes to operations on the kidney. This was a pertinent point brought out by an extensive correspondence on this very subject in order to gather data for this paper.[2]

The very fact that we, as ophthalmologists, are often the first to apprise the patient of any kidney lesion makes the subject of great interest to us. And, if the future will soundly establish the value of kidney decapsulation, it is our duty to follow up such cases now, with or without eye lesions, as submit to the operation.

True it is that we do not at present definitely know how the operation accomplishes the good it does,[5] even in those cases without deep-seated fundus lesions. That is to say, the pathologists have been unable to give any definite data, and experimental work[6] along this line does not seem to offer a very satisfactory solution.

The deep-seated fundus lesions usually accompanying an interstitial, parenchymatous, or diffuse nephritis of the chronic variety, are about the same in character. We know these to be a simple retinitis, neuroretinitis, optic neuritis (all with or without retinal hemorrhages), and some form of choroiditis. From the fundus alone we can not determine what form of kidney lesion is present. But when a retinal lesion is present we know that it materially adds to the gravity of the prognosis. The severity or extent of the fundus lesion in a measure indicates the amount of kidney and vascular involvement. The reverse of this statement is also a fact, in a limited degree.

The frequency with which the fundus is implicated in the various forms of chronic nephritis is startling. According to Lécorche 20 per cent., according to Galezowski 33 per cent., and according to the writer at least 30 per cent. of all chronic Bright's disease patients present some fundus complication. It is not by any means such a

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* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

1. Following is the main surgical literature on decapsulation of the kidneys. There are included references to two articles (by Ferguson and Whitacre), which have appeared in THE JOURNAL since the reading of the paper. Edebohls, G. M.: "Renal Decapsulation for Chronic Bright's Disease," N. Y. Med. Record, March 28, 1903; also "Question of Priority in the Surgical Treatment of Chronic Bright's Disease," N. Y. Med. Record, April 26, 1902, p. 651; Also, "The Cure of Chronic Bright's Disease by Operation," N. Y. Med. Record, Dec. 21, 1901, p. 961; see also Brit. Med. Jour., Nov. 8, 1902, p. 1507. Ferguson: THE JOURNAL A. M. A., July 4, 1903. Whitacre: THE JOURNAL A. M. A., May 23, 1903. Primrose, A.: "The Operative Treatment of Chronic Bright's Disease," Canadian Jour. of Med. and Surg., 1902, xi, p. 143. Harrison, R.: London Lancet, Jan. 4, 1896, p. 18; also British Med. Jour., Oct. 19, 1901, ii, p. 1125. Rovsing, T.: "Operative Treatment of Chronic Nephritis," Mitthellungen a. d. Grenzgebieten d. Med. u. Chirur., 1902, vol. x, p. 288. Guiteras, R.: "The Surgical Treatment of Bright's Disease," N. Y. Med. Jour., 1902, lxxv, p. 847. Lyman, C. B.: "The Surgical Treatment of Chronic Bright's Disease," THE JOURNAL A. M. A., 1902, xxxviii, p. 1030. Pousson, A.: "De l'Intervention Chirurgicale dans les Nephrites Médicales," Annales d. Maladies d. Organs Genitourinaires, 1902, xx, pp. 513, 641 and 832. Israel: Deutsche med. Woch., Feb. 2, 1902. Gradle, H.: "Neuroretinitis Due to Disease of the Kidney," Chicago Med. Recorder, Nov. 15, 1902, p. 321.

2. About 200 letters were sent out by the writer to men of repute, both surgeons and ophthalmologists, in various sections of the country in reference to this question.

3. This is, perhaps, the first attempt that ever has been made to gather data and discuss this question from the standpoint of the ocular involvement in chronic nephritis and its relation to decapsulation.

4. This was on Jan. 10, 1898. The first operation and the five preceding it which led up to the question of decapsulation are reported in the Medical News, April 22, 1899.

5. Harrison attributes the results to the relief of tension. Edebohls and others add to the relief of tension the establishment of a more extended vascular formation with a greater anastomosis. Ries, Bernays and others do not place any weight on the new vascular formation. Zeit of Chicago says the kidney regenerates function quite rapidly if tension is removed. Ries made sections of two kidneys and found no increased blood supply. Israel says concerning the mechanism of the operation that an inflamed tissue may be made to retrogress toward the point of health by splitting the affected structures. According to him, new venous anastomoses are formed between kidney and capsule.

In the eye, the operation causes a decrease in the amount of albumin in the lymph channels, thus reducing the liability of deep ocular complications in consequence of lymph and vascular disturbances. This idea is advanced by Oliver and is, in a measure, supported by the writer.

Perchance the free circulating albumin takes on a certain toxic tendency and in this way excites inflammatory reactions in the retina or other eye structures.

6. Albarran and Bernard found in rabbits a rapid regeneration after the splitting of the capsule. Within two weeks it was reformed and within two months as dense as the normal capsule and not as vascular. The cortex showed superficial lesions, not very extensive. See also La Semaine Médicale, 1902, vol. xxii, p. 215.

Tait of San Francisco, on everting the kidney from the capsule in numerous rabbits, found a dense adherent fibrous mass surrounding the kidney within two months afterward. Johnson, before the California Academy of Medicine and Surgery, in November, 1902, reported a series of experiments in corroboration of the work of Albarran and Bernard.

very doubtful statement that every one with a chronic nephritis will probably have some fundus implication before he dies (provided the nephritis carries him off). For we know that the fundus may be involved and yet the patient not be aware of it. There is no stated time during the nephritis for the retinal or other fundus lesion to appear. At times these lesions are the initial symptoms; again, they appear very late or very early in the attack of nephritis. And we are aware that frequently the very first diagnosis is made by an ophthalmoscopic examination. So much importance ought we to attach to this statement that a careful examination of the kidney should be made whenever a retinal lesion of an inflammatory nature is detected. This is also true with reference to the acute forms of nephritis on behalf of the retina.

The death rate for nephritis with fundus complications, especially retinitis, is exceedingly high. The majority of statistics of this kind were taken without reference to the fact whether the kidney lesion was unilateral or bilateral.[7] That we can have a one-sided chronic parenchymatous, interstitial or diffuse nephritis for quite a period of time is to-day a well-recognized and accepted clinical fact. We also know that a small portion of healthy kidney can meet the demands of the economy, and that two kidneys are not necessary to maintain life. Clinicians now tell us that a part or the whole of one kidney may be involved in the aforementioned diseases. True, if one kidney is affected the other is liable to become involved, as the same etiologic factor is present. Often one kidney is rather extensively involved before the other is implicated. However, should only one kidney remain involved, the prognosis as regards life is very favorable, other things being equal. These cases, however, are very rare.

The age of the patient is an important factor as regards the prognosis. Whether a unilateral or bilateral nephritis, the death rate rapidly increases in an inverse proportion to the age, i. e., in the twenties and thirties the death rate is considerably higher than in the sixties or seventies. Again, the mortality is greater in hospital than in private practice.[8]

The fundus complication, too, may be unilateral or bilateral.[9] However, the great majority are bilateral, just as perhaps the kidney lesions are more often bilateral. The fundus lesion serves as an indicator as to the extent of kidney involvement; it also serves the same as regards the prognosis. In this particular it matters little whether the fundus lesion is unilateral or bilateral, though, naturally, the bilateral involvement is the graver. Hence it may be that those with retinal complications who outlive the classical two-year period have had but one kidney involved at the time, or one may have been considerably less involved. Nevertheless, postmortem examinations show ultimately an usual bilateral nephritis and retinitis. The nephritis may exist for some time before albumin is observed in the urine, and in these cases the retinitis is often the first observable diagnostic lesion.[10] The retinal lesion may also be late in appearing, and then, as a rule, the disease makes rapid strides.

It is yet an open question in what manner the fundus and kidney lesions are associated. Traube says it depends on excessively increased arterial tension, yet in many cases there is no cardiac hypertrophy. Weeks and Samelsohn attribute it to a general vascular—both arterial and venous—disturbance which takes place in both organs at the same time. Cardiac hypertrophy[11] is an important factor in the production of the retinal hemorrhages. The theory of auto-intoxication is not to be lightly considered in this particular. Furthermore, we may have a chronic Bright's disease without retinal complications for some time, on top of which an acute attack supervenes with rapid retinal involvement.

We are now in a position to review the results of decapsulation of the kidney in this class of cases. The forecasted conclusions to be drawn from these cases are, to say the least, not encouraging. And, what is more, the cases strikingly illustrate that as yet we have found no cure or even a wholesome palliative measure for any form of chronic Bright's disease with retinal complications.

There are 15 cases, and all except two died in consequence of the nephritis within the two-year period. One of them died from tubercular peritonitis. Of the two still living, the history of one case (No. 14) is very questionable. The other is losing ground.[12] Between the ages of 20 and 40 there were six cases; between 50 and 60 five cases; between 60 and 70 two cases. The age was not given in two. These cases were nearly all in hospital practice and gave a higher death rate than the well-known Belt and Bull[13] statistics (85 per cent. for the first year and 93 per cent. of the remainder for the second year).

It is not necessary to give the detailed history of any of the cases, as they are all about the same as in everyone's practice. In Gradle's case (operated on by Ries) the improvement in the vision was simply remarkable, from 5/200 to 20/90. In the writer's case (seen in consultation with Ries and operated on by him) the vision rose from 20/60 to 20/20 minus and remained so until death. The same in this particular is true of Gradle's case. In Ochsner's case the vision was improved after the first operation. In these 3 cases, which the writer had the privilege of examining, the retinal condition improved remarkably after the operation. In one case (No. 6)

7. In order to determine whether one or both kidneys are affected, a urethral catheter or a Harris' segregator must be employed. These methods of examination have been in vogue but a short time. No statistics of albuminuric fundus complications, as regards the mortality rate, have been compiled since. Radiography may, in some instances, determine which kidney is involved, but this method is not very reliable.

8. Bull, C. S. (Trans. Amer. Ophthal. Soc., 1886), cites a series of 103 cases, 87 per cent. dying within two years; 6 died in the third year, 4 died in the fourth year and one in the sixth year. Miles, Milley ("The Prognosis of Neuroretinitis in Bright's Disease," Ophth. Soc. U. K., 1888), in a series of 51 cases in which the retinal lesion was determined early, 53 per cent. died within six months.

Haehnle, E.: ("Ueber die Lebensdauer der an Retinitis Albuminurica Erkrankten," Diss. Tuebingen, 1897), found that in a series of 98 cases 56 per cent. died the first year and 68 per cent in the two years. For further statistics see the following: Possanner: "Ueber d. Lebensdauer n. d. Auftreten v. Retinitis Albuminurica," Deutschmann's Beitrage z. Augenheilk., xv, s. 22, 1894.

9. Cases where one fundus only was implicated for a long time are cited by: Leber: Handb. d. ges. Augenheilk. (Graefe-Saemisch), 1 Aufl., s. 583. Hales, H.: Brit. Med. Jour., 1894, vol. ii, p. 1245. Bull, C. S.: Loc. cit. Weeks, J.: Arch. f. Augenheilk., xxi, p. 54 (Pathology of Ret. Albuminurica). Webster, D.: N. Y. Policlinic, 1894, iii, p. 161. Werbil: Arch. f. Augenheilk., xxxvii, p. 173, 1898. Moore, O.: N. Y. Med. Jour., April 17, 1886.

10. Hirschberg, Abadie, Gand and Eyre speak of a retinitis before albumin appears in the urine as "prealbuminuric retinitis." (Quoted by Groenouw and Uhthoff in Graefe-Saemisch Handb. d. ges. Augenheilk., 2d Ed., vol. xi, chap. xxii, p. 96.

11. Bull, C. S., found, in a series of 18 cases, 12 with cardiac hypertrophy which had retinal hemorrhages (Amer. Jour. Med. Sc., 1878, p. 57). Litten has made the same observations as Bull. The writer has about the same experience.

12. Reported to have died in June, 1903.

13. The combined number of cases in the Belt and Bull statistics is 258. Of these 153 died within the first year, 88 within the second year, leaving only 17 cases to live longer.

before operation, the neuritis was so marked that the disc could scarcely be outlined, while after the operation it was plainly outlined. In the cases operated on by Ries and Ochsner there were no degenerative changes present in the retina. Whether this was so in the other cases could not be ascertained. However, slight degenerative changes did develop after the operation in Cases 6 and 7, as is usual in well-marked cases of this kind. The increase in the field of vision in Case 6 is not very marked, yet it shows a decided improvement (see Fig. 1).

gorged and the arteries very much attenuated. The retina was spattered with small flame-shaped hemorrhages. The macular region was fairly free. The optic disc was very imperfectly outlined, due to the neuritis and the swelling; it equaled about 2 mm. Both eyes were about alike as to the changes present. V.=20/60 in each eye March 29, 1902. The field of vision on this day concentrically contracted as seen in the chart (Fig. 1).

STATISTICS OF CASES OF DECAPSULATION OF THE KIDNEYS.

Number.	Age, Sex.	Date of Diagnosis.	Kidney Lesion, Single or Bilateral.	Fundus Lesions.	Date of Last Operation.	Vascular Condition and Heart.	Immediate Result.	Final Result.	REMARKS.	Surgeons.
1	M., 67	June, 1901	Bilateral interstitial.	Retinitis albuminurica.	6, 14, '02. .	Mitral regurg., arteriosclerosis.	Died 48 hours later.	Fatal	Cause of death, uremia. Edebohls' case No. 39.	Edebohls
2	M., 62	Jan., 1902	As above . .	Ibidem	5, 26, '02. .	Aortic murmur and mod'rate hyper.	Died within 12 hours.	Fatal	Acute dilatation of heart the cause of death. Case No. 34.	"
3	M., 56	May, 1901	As above . .	Neuroretinitis	5, 28, '02 . .	Cardiac hyper. and arteriosclerosis.	Improvement.	Died on Nov. 8, '02; lived 5½ months.	Both the eyes and kidneys were markedly improved; relapse set in. Case No. 35.	"
4	M., 21	Dec., 1900	Bilateral diffuse.	Retinitis albu. V=1/200 in each eye.	4, 16, '02. .	Cardiac hyper. and aortic stenosis.	Vision marked improvement, kidney also.	Died 1, 18, '03	Improved for 5 mos. especially, lived 9 mos. after operation. Case No. 71.	"
5	M., 50	Apr., 1901	Bilateral interstitial.	Optic neuritis, temporary blindness.	5, 28, '02. .	Heart on verge of dilatation, hyper. also.	Died within 12 hours.	Fatal	Very desperate case—paresis.(?) Case No. 36.	"
6	F., 22	Mar., 1901	As above . .	Neuroretinitis. hemorrhages. V=20/60.—	3, 20, '02. .	Hypertrophy, cardiac.	Both organs improved and remained imp.	Died 8, 10, '03, tub. perito's, lived about 8 months.	Albumin disappeared entirely for a time, vision rose to normal, field enlarged, kidneys operated on at two sittings; albumin returned later on.	Ries & Suker, Chicago.
7	M., 39	Aug., 1902	As above . .	Neuroretinitis and hemor. V=5/200.	9, 1, '02 . .	Cardiac hypertrophy.	Marked improvement in eyes and kidney. V=20/30.	Died Dec., '02, lived about 4 months.	Cause of death uremia.(?) Dr. Gradle said field enlarged remarkably, so did the acuity. Segregator used in Nos. 6 and 7.	Ries and Gradle, Chicago.
8	F., 29	Apr., 1900	Bilateral interstitial.	Neuroretinitis more marked in one.	Oct., 1902 .	Hypertrophic heart.	Eyes did not change, rather grew worse.	Died Jan., '03. .	In this case a choked disc developed after first operation, vision decreased markedly.	O. Dodd and Ochsner Chicago.
9	(?)	Prior to 4, 10, '02	Bilateral interstitial.	Neuroretinitis	About 4, 10, '02.	Not given. . . .	Improvement. .	Still living, 4, 22, '03.	General condition improved, recurrent hemorrhage into retina and more mosaics.	C. A. Oliver, Philadelphia
10	M., 50	Prior to Apr., 1902	Bilateral interstitial.	Albuminuric retinitis.	April, 1902.	Not given. . .	Eyes not improved much.	Lived 7½ mos. 11, 1, '02.	Was a desperate case from the beginning.	A. C. Bernays, St. Louis.
11	M., 29	About 1 year ago	Bilateral interstitial.	Mild optic neuritis with few hemorrhages.	11, 10, '02 .	Cardiac involvement.	Temporary improvement.	Died 11, 17, '02.	Dr. O. performed a decapsulation on one kidney prior to 11, 10, '02; died of acute suppress. of urine and uremia	Ochsner and Suker, Chicago
12	(?)	. . . . .	As above	Album. ret., glistening spots (not characteristic). V reduced.	. . . . .	Cardiac hypertrophy.(?)	Died within a few days (4 days).	Fatal	Was a desperate case, almost moribund when brought to hospital.	Munro, Boston.
13	M., 29	Jan. 15, 1903.	As above . .	Silvery spots in macula. light streaks along arteries, V poor.	1, 27, '03. .	Not given(?) . .	Improved for a time.	Losing ground rapidly. Died in June 1903.	General condition improved some but eye symptoms not as a subsequent examination showed.	Munro.
14	M., 51	1898(?) . .	Bilat. chron. diffuse.	Failing eyesight, ret. album.(?)	6, 2, '02. . .	Varying am'ts of edema.	Good	Improved, living, 1, 19, '03, eyes no report.	This is Dr. Edebohls' case No. 37. (If this is a true case of retinitis albuminurica of so many yrs a standing, it is one of the wonders.—O. F. S.)	Edebohls.
15	M., 22	Dec. 21, 1901.	Bilateral interstitial.	Sudden blindness, Dec., '01	4, , '02. . .	Mitral regurg., hypertrophy heart.	Not good; lived 8 days.	Died 4, 19, '02. .	Died of uremia and exhaustion. Case No. 34.	Edebohls

1. The record "fatal" means that the patient died within 8 to 72 hours after the operation. The majority were bilateral decapsulations. Ries and Ochsner operated on one kidney and later on the other. Edebohls usually decapsulated both kidneys at one sitting.

2. C. A. Oliver is conducting a series of experiments to determine the effects of the operation on the amount of albumin in the aqueous humor.

3. Cases Nos. 6 and 14 can be excluded in drawing definite conclusions, because No. 6 died of an intercurrent disease and No. 14 has lived so long with a supposed albuminuric retinitis that perhaps the retinal trouble is of a different nature (advisedly stated).

4. The visual fields were taken in Ries and Ochsner's cases. In all (3 cases) it increased after operation.

5. The writer had the privilege of examining and watching the cases of Ries, Gradle and Ochsner, both before and after operation. These were typical cases in every particular, and therefore of great value in this statistic.

6. Some cases had blood casts, most of them presented hyaline and granular casts, a few had erythrocytes in the urine.

7. Ries has made many microscopic sections of the kidney after operation, but failed to find increased vascular anastomosis. Zeit. f. Hidem (personal communication).

8. The operation did not prolong life. The medical treatment offers a better percentage as far as prolonging life is concerned.

9. Since reading this paper the writer has obtained 4 more cases which were typical and submitted to the operation; they died within a few months thereafter.

10. Excluding the two cases, Nos. 6 and 14, the mortality rate is 90 per cent. What a showing in 17 cases!

NARRATION OF CASE.

Mrs. L. (operated on by Dr. Ries, Chicago).

Diagnosis.—Neuroretinitis albuminurica; chronic interstitial nephritis with rather marked cardiovascular implications.

Fundus Findings.—Disseminated albuminuric spots of the inflammatory type throughout the retina; the veins were engorged, the arteries attenuated. The optic disc was indistinct, the swelling equaling 2 mm. Vision was reduced to 20/60 in each eye.

April 23, 1902 (not quite four weeks after the capsulotomy) the nerve head could readily be outlined. The retinal hemorrhages had disappeared and the whole retina was greatly improved. The field of vision was materially enlarged (Fig. 1) and the acuity was: O.D.V. 20/40+3, O.S.V. 20/40+2.

At time of death (August, 1902) she was reported to have had practically normal vision. The cause of death was peritonitis. (For further particulars as regards the disappear-

ance of albumin and its return after the operation in this case see reports of Ries.)

The period of time that is regarded necessary to pass before the operation is considered as having produced a cure is six months, according to Edebohls. At the end of this time the urine must be free from albumin and remain so. But few of the cases with retinal complications outlived this period. The majority improved to some extent, both as to vision and urine, still the relapse came on rapidly in both organs and the patients died. True, in a few instances the improvement of the eye condition was almost miraculous. We know that even with the medicinal treatment marked temporary improvements take place and may even continue for some time. All the cases with eye symptoms, except one, died within the first year. The greater share, if not all, had a bilateral kidney and eye lesion and perhaps always bilateral at death. The majority gave decided evidences of cardiac involvement. The kidney lesion in each instance was a chronic interstitial or diffuse nephritis, or an acute attack on top of a chronic condition. The successes so far reported for decapsulation were for the

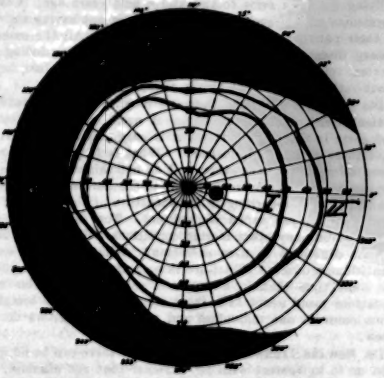

Fig. 1.—Mrs. L. I. Visual field on March 20, 1902, two days prior to the operation. II. Visual field April 23, 1902, about four weeks after the operation. The left field is practically the same as right. No scotomata in either field.

uncomplicated chronic nephritis. Whether or not the operation in any way hastened the exitus in the cases reported here is certainly very problematical, for they nearly all came, as it were, under the "two-year clause." The operation, in competent hands, is practically devoid of any dangers (kidney and life).

The mere fact that the general condition of the patient improved slightly after the operation does not establish its validity. For we know that often in not doing anything, excepting advising hygiene, marked improvements both as to sight and kidney take place.

If we could have an interstitial nephritis definitely limited to one kidney, though with more or less fundus involvement, the operation might, if performed early, be of great benefit. This can be partially supported by the fact that some uncomplicated cases of nephritis have survived the operation for a period of 3 to 10 years (see Edebohls). Knowing that the retinal manifestation indicates a very firm establishment of the nephritis and that a serious cardiac involvement is almost a constant factor, it does seem that the operation offers no ray of hope, either as a cure or as a permanent amelioration. The statistics pertinently show this point to be true. As fundus complications are so frequent in interstitial nephritis, it may be asked whether kidney decapsulation will prevent them if done very early. This is problematical. The exact limits beyond which the operation in any case, simple or complicated, will or will not fail to accomplish any good has not been determined. As far as albuminuric retinitis is concerned, all that can be said is that the results have been decidedly temporary, and this in nearly every instance.

In conclusion, we may recapitulate as follows:

1. The operation of decapsulation so far is not warranted in all instances, nor does it offer any hope in cases of bilateral chronic nephritis with retinal complications.

2. Though there is an improvement in the eye ground directly after the operation, still it is decidedly temporary, judging from the present statistics.

3. The operation may be of service in unilateral nephritis with fundus lesions in the initiatory stages. These cases, however, are rare, and, if found, soon become bilateral. Therefore, these latter cases would come under the first remark.

4. The mortality rate for albuminuric retinitis in chronic nephritis has not been lessened by the operation.

5. The statistics show that retinal complications are a decided index as to the severity of the kidney involvement.

6. In nearly all the cases of nephritis chronica the cardiac involvement is present and is an important prognostic factor. With the retinal lesion, it is usually present.

7. Unilateral retinal lesions are the exception in chronic nephritis.

8. As yet the medical treatment of all these cases yields as good results, if not a trifle better, than the kidney decapsulation.

9. Statistics of the mortality rate of albuminuric retinitis based on urethral catheterization are indicated. This is to determine whether those that outlive the two-year period might be cases of unilateral nephritis or are late in becoming bilateral.

The writer wishes to take this opportunity to express his gratitude to the various gentlemen who answered the circular letter in reference to this subject. In particular does he wish to acknowledge the courtesies of Drs. Ries, Gradle, Ochsner and Dodd of Chicago, Oliver of Philadelphia, Munro of Boston, Bernays of St. Louis, and Edebohls of New York.

DISCUSSION

ON PAPERS OF DRS. STRICKER AND SUKER.*

DR. HENRY DICKSON BRUNS, New Orleans—Dr. Stricker is entirely right in holding that the proportion of urea excreted in the urine is of far greater significance than the presence in the same fluid of more or less albumin. The general practitioner was somewhat slow in recognizing this truth and making practical use of it; it is not to be wondered at, therefore, that the oculist should have been still slower. To-day, however, I believe that all physicians of the first rank accept and act on it in the study and treatment of their cases of renal disease. They all, too, hold to the belief that it is the retention of the excrementitious products, of which the urea in the urine is the expression, that produces the lesions found during disease of the kidneys; the escape of albumin into the urine being a symptom of more or less importance according to the presence or absence of a host of other phenomena. Nor

* The paper of Dr. Stricker appeared in THE JOURNAL February 20, p. 514.

have the ophthalmologists followed far behind, as the passage cited by Dr. Stricker from Professor Leber, published twenty-six years ago and containing a citation from Von Graefe, plainly shows. Dr. de Schweinitz,[1] quoting J. B. Lawford, says: "Uremic amaurosis may occur in any of the various forms of renal disease in which there is sufficient interference with the function of the kidneys to load the blood with those poisonous materials, whatever their exact nature may be, which induce the uremic condition." And, again, that retinitis, retinal hemorrhages, etc., may precede albuminuria by a considerable time. It is probable, as Dr. Sutton suggests, that these are examples of granular kidney, in which albumin is absent, or only present to a very small extent until a later stage of the kidney affection. On the other hand, the lesions which I have described as occurring in the blood vessels, particularly various types of perivasculitis, and of "silver-wire" arteries, producing compression on underlying and overlying veins, are often present for long periods before the renal lesions are manifest, or at least before the other signs of renal disease are fully established; that is, albumin and casts. These expressions certainly indicate a belief that the excrementitious products are the injurious agents. So in a paper by Dr. S. C. Ayers[2] we read: "The question of the diminished excretion of urea is not a new one. Dr. S. Marx,[3] in a very interesting paper, states that this condition arises not from albumin, but from diminished excretion of urea. He states that many women with grave nephritic disease go to full term with little or no discomfort. He further states that albumin and casts have no meaning for him in the presence of a normal urea excretion, for with that he is in a position to know that sufficient of the effete products are being excreted and the condition of the safety valve in the engine of the body is evidenced by the behavior of this element. Whether this urea is really the offending agent or not, modern investigation does not allow us to state with any degree of positiveness. It is enough to this end to state that when there is a lessened secretion the patient suffers, and when hypersecretion occurs the patient is freed from those symptoms to us indicative of toxemia. Dr. E. E. Morse of Washington, D. C., endorses the theory of Dr. Marx. Dr. Stricker, then, deserves our thanks for bringing this subject to our attention at this meeting and emphasizing the necessity of observing whether or not the vision and other ocular symptoms vary with the fluctuations of the amount of urea excreted. His position as to the indications in the albuminuria of pregnancy seems eminently correct, but one must not be too sure that in every such case "the kidney disease will subside quickly after labor is terminated." I once saw a case where albuminuria had been recognized only after the pregnancy had begun. Shortly after the birth of her child the patient became quite blind, and I was called in. The eyes showed typical Brightic changes. The patient did well for a few days, but then fell into convulsions and coma, and died. The fact that vision may improve even to the normal in any form of Brightic retinitis, although there may be little, if any, change in the ophthalmoscopic appearances, may now be taken as established. A case (No. 11) reported by Dr. C. S. Ayers[4] would go to prove that even extensive degenerative changes may clear up, though this is unusual, if time enough be afforded. In Dr. Ayer's case the patient had had nine pregnancies. In the fourth, fifth, sixth, seventh and ninth there had been failure of vision. Premature delivery occurred in the seventh month of the ninth pregnancy, and her eyes were examined some time after; the right equaled 0.1 and the left equaled 0.7. There were characteristic alterations in each eye and numerous white patches in the retina of the left. Twelve years afterward he found the right eye perfect; L. E. V. equaled 20/xl, but with +0.75 cyl. ax. 110 degrees it equaled 1. The retina looked normal and healthy, and there was no trace of patches. While there is no etiologic connection established between senile cataract and albuminuria in premature cataract—cataract occurring in middle life—the urine should always be examined. Finally, perhaps, I may be permitted to say that while pathologist of the Charity Hospital, as many as ten years ago, the fallacious nature of albuminuria as an evidence of renal disease was forced on my attention by the not infrequent finding of casts in urine showing freedom from albumin by the most delicate tests. In a series[4] of 2,441 first examinations, casts without albumin were found 40 times—about once in 61 times. The kinds of casts were: Epithelial in 1 instance, granular in 4, hyaline in 14 and unrecorded in 21 instances.

DR. ALLEN GREENWOOD, Boston—A large number of these cases should be considered from the standpoint of arterial degeneration, rather than from the standpoint of kidney disease. I classify my cases in two groups: one, the aged people with general arterial degeneration, in whom you find degeneration of the arteries of the retina and choroid sometimes before there is evidence of kidney lesion; and the other, in the young and middle-aged, where you have distinct chronic parenchymatous nephritis with retinal changes and death in a few years. In the last twelve years I have seen 26 cases in private practice, and have followed all but 2 to the ultimate end. Out of the 26 cases only 3 are living, and none of the 3 living was seen prior to two and a half years ago. I think physicians and surgeons make a mistake in not having the eyes of their patients examined more frequently. All the cases of kidney disease at the Boston City Hospital are, during my service, referred to me for ocular examination. Just before death retinal changes are nearly always present.

DR. LEARTUS CONNOR, Detroit—Why is it that we have patients with deficient excretion of urea, and with albumin and casts in the urine, but yet it is only occasionally that we have these ocular complications? What is in these particular cases different from the others? I do not think we can answer the question except by referring it to the personal equation of the individual, something in the structure of the retina of the one. This is yet to be worked out. The same thing confronts us in many other morbid conditions. Why should there be this difference in urea excretion? What are these excrementitious products? What are these toxins? We have known for some time that in a pregnant person such ocular complications mean death in a short time, but why the complications occur in one individual and not in another, we do not know.

DR. EDWARD JACKSON, Denver—I think there can be no question as to agreement with Dr. Stricker that not albumin, but deficient elimination of urea, is the factor of importance. My experience would point out that why one patient has retinal lesions and another has not depends on the condition of the general vascular system. I have never seen a typical case of albuminuric retinitis without involvement of the vessels generally. But sometimes where I have found slight lesions of the disc and retina and decided changes in the vessels, careful and repeated examination has failed to show any changes in the urine. The retinal lesions are associated with vascular changes. This leaves a small loophole for the surgeons who urge decapsulation. The cases that present retinal lesions are evidently not saved, so far as our statistics indicate; but possibly there is a class of cases of chronic nephritis that do not have retinal lesions and are not liable to have them, that may be helped by the operation. But so far as those cases are concerned about which we can form a prognosis, his paper indicates that they are not permanently helped.

DR. G. E. DE SCHWEINITZ, Philadelphia—While it is true, in general terms, that ocular lesions may occur with any form of nephritis, the various types of retinitis are most frequently associated with chronic interstitial nephritis (that is, with renal sclerosis), whether this is an independent primary affection, or whether it is a sequel of arteriosclerosis. It seems to me undoubtedly true, as Samuel West has recently insisted, that a sharp distinction should be made between the degenera-

1. "Ocular Manifestations in Chronic Bright's Disease," Proceedings of Phil. Co. Med. Soc., 1902.
2. Cincinnati Acad. of Med., April 14, 1902; Amer. Jour. Ophth., October, 1902.
3. Med. Record, April 20, 1901.
4. "Notes on Examination of the Urine," by H. D. Bruns, M.D., Med. News, Sept. 7, 1895.

tive and exudative forms of albuminuric retinitis. The former indicate the presence of chronic granular nephritis, and the degenerative changes depend on vascular alterations. The latter indicate a chronic parenchymatous nephritis and probably depend on an inflammatory or toxic influence. To put this in other words, albuminuric retinitis of the degenerative type is a symptom of vascular changes, which in their turn are widespread throughout the body, and not necessarily a symptom of kidney disease itself as an isolated condition; that is, the nephritis and the retinitis are both caused by the vascular lesions. Doubtless, Dr. Jackson is correct in stating that in the great majority of instances it is possible, ophthalmoscopically, to see lesions in the retinal vessels no matter what the type of the so-called renal retinitis may be, but none the less I am persuaded that the distinction before referred to is worthy of consideration.

DR. O. A. GRIFFIN, Ann Arbor, Mich.—A recent case of albuminuric retinitis proved interesting because of its sudden development and early termination. A woman about 60 years of age had her hip fractured and her physician made repeated examinations of her urine with negative results. About five months later she became suddenly partially blind, the condition being attributed to a general debility. Two weeks later I was called and found that the vision could not be materially improved by lenses. An examination revealed the characteristic fundus changes, and on testing the urine a large amount of albumin was found. The case was then referred back to her physician, but treatment was of little avail, death occurring within seven months.

DR. LOUIS STRICKER, Cincinnati—I would not like to leave any one under the impression that I do not recognize that a certain number of cases are the results of vascular changes. They result from the general vascular fibrosis, which is present all over the body, but I believe that the majority, including most typical cases, are not those of vascular changes, but are consequent on toxemia. I might say that the fibrosis is in all probability due to toxemia. True, where we get closure of the vessels, it is but natural that necrotic changes and hemorrhages follow, but the typical conditions are due to toxemia. Recently a woman came to me with a pure neuritis. I found her urea quantity one-tenth normal, and put her on treatment for Bright's disease, sweating her freely. This was not a typical case of neuroretinitis Brightica, but while she was under treatment in the hospital, as I observed her from day to day, this typical picture did develop. In spite of the treatment, the necrotic conditions went on. This was not a vascular change, but was undoubtedly the result of chemical irritants in the blood, the pure toxemia. These toxins do not come from the kidneys. The supposition is that they are the result of an imperfect metabolism, a break in the chain leading up to a perfect conversion of proteids into uric acid and urea in the liver. Where this conversion is interfered with, the toxins develop. Just what these are we are unable to state, but one thing is sure: when urea fails of perfect excretion from the kidneys, either this as such or the toxins produced remain in the system and are the causative factor of inflammation. I would again repeat, greater stress is to be laid on the reduction of the urea below the normal in the urine than on the presence of albumin; and this is a point which all text-books on the eye fail to recognize. Albumin in the urine simply indicates that the kidneys permit it to escape; that they are diseased, but loss of albumin does not produce eye disease. These diseases, I take it, are not the result of anemia, but of chemical irritants or poison circulating in the blood. One of the latest works on obstetrics advances the idea that the Bright's disease of pregnancy is due to the impaired action on the part of the liver. I do not see how the taking off of the capsule and tearing the kidney tissue is going to do any good. I appreciate that the removal of tension can give the kidney a chance to regain its function, but this could only be of service in acute cases; beside, the operation is surely an extremely dangerous one, and I, for one, would hesitate to use it.

DR. GEORGE F. SUKER, Chicago—Dr. Edebohls is operating on a great variety of cases, including even puerperal eclampsia. Whether or not the operation is indicated in all the classes of nephritic lesions is certainly an open question. One must carefully weight the advisability of suggesting the operation in any form of albuminuric retinitis. From the statistics given in the paper, one can hardly see any justification for the operation in chronic forms of nephritis with retinal lesions. The operation has not been tried in a sufficient number of cases of acute nephritis with retinal lesions to be of any value in deciding its justification. Again, the indication for the operation must to a certain degree depend on the fact whether the Bright's disease is a pure nephritic lesion or is due to a general arteriosclerosis. If the latter, the operation can accomplish little; but a good deal if due to the former cause. As yet, it is too early to render a final opinion whether the operation is justifiable in cases of nephritis with fundus lesions. Still, we have no right to discard the operation without giving it a fair and extended trial in well-selected cases.

SOME REMARKS CONCERNING THE OCULAR AND AURAL REQUIREMENTS OF RAILROAD EMPLOYES.*

FRANK ALLPORT, M.D.

Professor of Clinical Ophthalmology and Otology in the Medical Department of the Northwestern University; Eye and Ear Surgeon to the Chicago & Northwestern Railway, Chicago & Eastern Illinois Railway.

CHICAGO.

Some three years ago the Interstate Commerce Commission published an interesting report of railway accidents occurring in the United States in one brief year. There is no reason to suppose that this was an especially unfortunate year, and as the figures are instructive and full of significance, I will quote some of them.

The total number of personal accidents was 51,743, and of these 7,123 were killed, 2,210 being railway employes; 334 employes were killed and 2,153 injured by collisions and derailment, and 82 passengers were killed and 1,557 passengers injured from the same cause.

The causes of these accidents are doubtless numerous, but have not been, so far as I am aware, statistically enumerated, although such tabulation would be most interesting and instructive. A small minority of the accidents were perhaps in the ordinary course of events unavoidable, but a large majority were probably preventable, and due to carelessness or physical defects on the part of train operators. Of such physical defects it is reasonable to suppose that ocular and aural defects, especially the former, played a most important part, for no physical condition, except the mental condition, is so intimately connected with the moving of a train as vision. The eyes are continually in service—watching for signals, both luminous and non-luminous, looking at the track and searching for approaching trains, familiar objects, etc., etc. In short, there is not a moment during the active operation of a train that the engineer and his fireman have not a vital interest in good vision, and the same is true in a mitigated sense of the conductor, brakemen, switchmen, bridgemen, etc.

I am confident that if statistics could be gathered of the accidents caused by bad eyes, even for a single year, the showing would be so appalling that every intelligent railway official would require no further incentive to perfect the ocular status of his men.

In order to ascertain what was being done to regulate this important essential to transportation security,

* Read before the American Academy of Railway Surgeons, Oct. 1, 1903.

some years ago a committee, of which I was chairman, was appointed by the Section on Ophthalmology of the American Medical Association, to investigate this matter and report back to the Section. Owing to many obstacles, the Committee was not able to report finally until the year 1901 at the St. Paul meeting of the Association. Meanwhile we gathered statistics which have proven of immense value in placing the work on a solid foundation.

Letters of inquiry and a question blank were sent to every railroad in North America possessing over 100 miles of road, and 244 companies were thus addressed, operating a total of 205,638 miles. One hundred and twelve roads replied, aggregating 147,838 miles of road. These figures represent almost all the large systems, for those not replying were principally the small railroads, many of whom have now been merged into the larger systems. I found that out of 112 roads, 77 require some kind of a systematic eye and ear examination of those employes who are actively engaged in running trains and in giving and receiving signals; 29 of the roads require such examinations to be made by regularly appointed railway surgeons; 31 allow various kinds of railway employes to make the examinations; 9 roads send doubtful cases to an eye and ear surgeon; 16 roads require examinations to be made by regularly appointed eye and ear surgeons, and 4 allow such examinations to be made by the medical directors of railway associations.

In answer to the question: "Do you require re-examination from time to time, and if so at what interval or under what circumstances?" I find that 1 road requires re-examination every six months; 7 roads require re-examinations every year; 21 roads every two years; 9 roads every three years; 2 roads every four years; 19 roads require re-examinations when it is deemed advisable, and especially on promotion and after accidents and illness; 3 roads require re-examination on promotion only.

Concerning the question: "Do you require perfect vision, color sense and hearing in new employes, and what concessions do you permit from a perfect standard in the case of old employes?" I find that 26 roads require perfection and allow no concessions to old employes; 41 roads require perfection from new employes and allow, according to circumstances, various concessions to old employes.

Concerning the question: "How long must a man work for your road before you call him an old employe?" I find that 2 roads call a man an old employe as soon as he is enrolled in the service; 7 roads require one year service; 3 roads two years' service; 12 roads three years; 12 roads five years; 7 roads ten years; 3 roads fifteen years.

Concerning the question: "Do you permit old employes to wear glasses for distance when on duty?" I find that no road allows new applicants to wear glasses for distance in order to bring vision up to a normal standard; 74 roads allow old employes to wear glasses for distance; 13 roads do not allow glasses to be worn for distance at all.

The report of the committee which was presented at the St. Paul meeting was as follows:

SECTION 1. The essential principle to be advocated is that railroad corporations shall require a scientific and correct examination of the eyes and ears of those employes at all to be concerned with the active operating of trains, or in giving or receiving signals.

SEC. 2. Such primary examinations should, whenever possible, be made by regularly appointed eye and ear surgeons, and this fact is emphatically urged, especially as the expense of a first examination may always be borne by the applicant; but if such a course is not deemed expedient, the company's surgeon, aided by his medical assistants, might conduct them, with the understanding that all doubtful cases shall be sent to a regularly appointed eye and ear surgeon.

SEC. 3. There shall be two general standards of visual and aural requirements, viz.; those for new men hoping to enter the service, and to be actively engaged in the operation of trains, and in giving and receiving signals; and, secondly, those men engaged in similar work, who have been uninterruptedly in a company's service for five years, and who have, therefore, a right to be called "old" employes.

SEC. 4. New men shall be required to possess perfect color sense. They shall also have a vision of 20/20 in each eye, without glasses, and have healthy eyes, and not over one diopter of hypertropia. They shall also hear the whispered voice at 20 feet in a quiet room, and have healthy ears.

SEC. 5. For the purpose of graduated requirements, old employes shall be divided into two classes, as follows: Class A—Engineers, firemen, conductors, brakemen, switchmen, signalmen, switchtenders and engine dispatchers. Class B—Track foremen, bridge foremen, crossing flagmen, bridgetenders, gatemen, train baggagemen, telegraph operators, station agents, and station baggagemen.

Employes enumerated in Class A shall not be retained in such positions if vision sinks below 20/30 in one eye and 20/40 in the other, or if the whispered voice can not be heard in a quiet room at 15 feet by one ear and 10 feet by the other. Employes enumerated in Class B shall not be retained in such positions if vision sinks below 20/40 in one eye and 20/50 in the other, or if the whispered voice can not be heard in a quiet room at ten feet by both ears. Employes, and especially engineers and firemen, enumerated in Class A must reach the visual standard without glasses and will not be allowed to wear distance glasses when on duty. Employes enumerated in Class B may reach the visual standard with glasses, and will be allowed to wear glasses when on duty, and will be required to do so if the wearing of glasses is necessary to bring vision up to the proper standard, and shall always be required to carry an extra pair of glasses when on duty, in case of accident to one pair. All employes shall have perfect color sense.

SEC. 6. Re-examination shall be made of all men every three years, and after a severe illness, or accident, or any occurrence which seems to cast doubt on the visual and aural capacities of the individual. Re-examinations shall also be made more frequently on men known to be excessive users of tobacco, or to be suffering from syphilis, albuminuria, diabetes, or acute or chronic eye and ear diseases. Men shall always be re-examined before promotion.

SEC. 7. Men known to be excessive users of liquor shall not receive employment.

This report was adopted by the Section on Ophthalmology, and the Committee requested to present it to the House of Delegates of the American Medical Association at its next meeting at Saratoga, which was accordingly accomplished. Owing to some diversities of opinion, the resolutions as presented in the Section on Ophthalmology had to be remodeled in order to insure their passage. The resolutions as remodeled, I now beg leave to present:

SECTION 1. It is essential that railroad corporations should require definite and scientific examinations of the sight and hearing of those employes who will be at all concerned with the active operating of trains or in the giving or receiving signals.

SEC. 2. Such examinations should, whenever possible, be made by regularly appointed eye and ear surgeons; and in all cases be conducted according to the instructions, and under the supervision of a regularly appointed eye and ear surgeon, and with apparatus and under conditions approved by him, and all doubtful cases should be referred to him for personal examination.

SEC. 3. Now men should be required to hear the spoken voice at 20 feet in a quiet room, and have healthy ears.

SEC 4. The acuteness of vision should be tested by the test types of Professor Snellen, or those which conform to the standards.

SEC. 5. The following minimum requirements should be adopted for acuteness of vision:

	ENTRANCE TO SERVICE OR PROMOTION.	RE-EXAMINATION OF THOSE IN THE SERVICE.
CLASS A.		
Enginemen (road service). Firemen (road service).	20/20 in each eye tested separately without glasses.	20/30 with both eyes open, without glasses. Each eye should also be tested separately and the vision of each noted.
CLASS B.		
Other employes in the engine, train or yard service, and car and engine inspectors.	20/30 in one eye and not less than 20/40 in the other, tested separately without glasses.	20/40 with both eyes open without glasses. Each eye should also be tested separately and the vision of each noted.
CLASS C.		
Towermen, telegraph operators, station agents, section foremen.	20/30 in one eye and not less than 20/40 in the other. Tested separately with or without glasses.	20/40 with both eyes open, with or without glasses. Each eye should also be tested separately and the vision of each noted.
CLASS D.		
Crossing Flagmen.	20/40 with both eyes open, with or without glasses.	20/50 with both eyes open, with or without glasses.

SEC. 6. The color perception should be tested by means of the colored worsteds of Professor Holmgren, preferably with worsteds tagged with the purpose of record; also, that in every case an additional test should be made with a lantern showing a number of colored lights, which can be varied in their size and intensity.

SEC. 7. (a) Employes enumerated in Class A must reach the visual standard without glasses and should not be allowed to wear distance glasses when on duty.

(b) Employes enumerated in Classes B, C and D should be allowed to wear glasses when on duty, and should be required to do so if the wearing of glasses is necessary to bring the vision up to the proper standard. They should also be required to carry an extra pair of glasses when on duty, in case of accident to one pair.

(c) Employes enumerated in Class A should not be retained in such positions if the vision sinks below 20/30 with both eyes open, or if the spoken voice is not heard in a quiet room at 15 feet.

(d) Employes enumerated in Classes B and C should not be retained in such positions if the vision sinks below 20/40 with both eyes open, and Class D, whose minimum standard should be 20/50; or if the voice can not be heard in a quiet room at 10 feet by both ears.

SEC. 8. There should be two general standards of visual and aural requirements, viz.: One for men hoping to enter the service, and to be actively engaged in the operating of trains, and in giving and receiving signals; and one for those men engaged in similar work who have been uninterruptedly in a company's service for five years, either the company from which employment is sought, or some other company enforcing similar regulations. These latter may be regarded as old employes.

SEC. 9. Re-examinations should be made of all such employes every three years; and after any severe illness, or accident, or any occurrence which seems to cast doubt on the visual and aural capacity of the individual. Re-examinations should also be made more frequently on men known to be excessive users of tobacco, or to be suffering from syphilis, albuminuria, diabetes, or acute or chronic eye or ear diseases. They should always be examined before promotion.

SEC. 10. Men known to be excessive users of liquor should not receive employment for the services above designated (Section 5). The co-operation of the employes themselves should be sought by regulations that will encourage them to report promptly any temporary impairment of vision or hearing.

These resolutions have been sent to every railroad in North America, and have already accomplished an immense amount of good. Many companies which have never taken up this work at all, have expressed a determination to put it into execution at once, and others who have been using inferior methods express themselves as intending to improve such methods along the lines indicated.

There are a few important points of difference between the report of the Committee adopted by the Section on Ophthalmology and that adopted by the House of Delegates of the American Medical Association. For instance: In Section 2 the Section on Ophthalmology report reads: "Such primary examinations should, whenever possible, be made by regularly appointed eye and ear surgeons," etc. The same section as adopted by the House of Delegates, reads: "Such examinations," etc. The Section on Ophthalmology felt that it did not wish to draw the lines too hard on the railroads, and therefore use the word "primary," feeling that if the first or entrance examinations were made by the company's eye and ear surgeon, that the subsequent examinations might with reasonable safety be left with the company's surgeons for execution, with the understanding that doubtful cases would be referred to the company's eye and ear surgeon for decision.

Section 3 of the Section on Ophthalmology report corresponds with Section 8 of the House of Delegates' report, and I have no hesitation in saying that I regard one feature of the latter report as superior to the former, viz., the clause which refers to the interchangeableness of positions from one road to another whose requirements are similar, without loaing the right to be regarded as an old employe. I am convinced that a man who has undergone primary examinations for one road and been accepted and placed at work, should be able to go to work for another road whose physical requirements are essentially similar, without loaing the benefits of his time privileges. This feature of Section 8 of the House of Delegates' report I cordially indorse and hope it may become generally operative.

I find no reference in the House of Delegates' report concerning the requirements for the color sense except as found in Section 6, which contains nothing of an obligatory or mandatory character. The only explanation for this omission is of course the presumption that it is an oversight, and I should recommend that a clause be inserted in Section 5 of House of Delegates' report, after the words "acuteness of vision," to read as follows: "It being understood that all employes at all concerned in the active operating of trains, and in giving or receiving signals, should have perfect color sense."

Under Section 5, House of Delegates' report, under the requirements for re-examinations of those in the service "belonging to Class A," it says: "That the employe shall possess a vision of 20/30 with both eyes open, without glasses. Each eye should also be tested separately and the vision of each noted." This opens a wide avenue of discussion. The report of the Section on Ophthal-

mology concerning this same point, says that "Employes enumerated in Class A shall not be retained in such positions if vision sinks below 20/30 in one eye and 20/40 in the other." In other words, a reasonable standard is required of each eye, and it seems as if this must appeal to the judgment of anyone at all familiar with such work. Would anyone in this society care to travel on a train at the rate of 50 or 60 miles an hour with an engineer wearing a glass eye? I think not; the idea is untenable, and yet this is exactly what the House of Delegates' report permits, for it says that vision must be 20/30 with both eyes open. To be sure, it also says: "Each eye should be tested separately, and the vision of each noted," but it goes no further. It does not inflict any penalty in case an engineer has one blind eye. While disposed to be most liberal with the old employes of a road, and while recognising its advisability and almost necessity if good service and freedom from labor union complications are to be encouraged, I still can not indorse the idea of testing with both eyes open, and of ignoring the condition of a man's worst eye. The idea is evidently conceived from the action of the International Congress, which met in Amsterdam in 1879, and which in formulating rules for the ocular condition of transportation employes, under the guidance of Professor Donders, repeatedly speaks of testing with "both eyes open." This was evidently recommended, because it is well known that one eye assists the other to see, and the Committee desired to treat all employes with all possible clemency, but they did not in their recommendations ignore the condition of either eye. For instance, in the case of engineers and firemen, while visual acuteness with both eyes open must be normal, still the worst eye must have visual acuteness of not less than one-half. Stationmasters, etc., must have a vision in the worst eye of not less than one-quarter, etc., so that the recommendations of the House of Delegates in absolutely ignoring the visual capacity of the worst eye in case of re-examinations seem to so far transgress the laws of good judgment as to make it only reasonable that this feature should be amended.

In making such amendments, I feel that several things should be considered, and while being, perhaps, as anxious for the maintenance of a high standard as anyone, and while unwaveringly insisting on perfection in the case of new employes, I increasingly feel that we must be most liberal in our concessions to old employes, and the older they are, and the longer they have worked for a certain company, the more liberal must we be. This conclusion has been reached after a long and extensive experience with railroad men, and while feeling that public safety must always be subserved—and it would be most beautiful if ideal and altruistic conditions might always be obtained—we, nevertheless, can not entirely ignore the practical issues of the problem. For instance: Here is an engineer who has worked in this capacity for forty years for a single company. He is an old man of much experience and excellent judgment, and has never had an accident that could be attributed to poor vision; and yet, nevertheless, has now a vision which has become reduced to 20/70 in one eye and 20/50 in the other, without glasses. When his vision is corrected with glasses his vision can be improved to say 20/40 in one eye and 20/30 in the other. Now let me ask you, what are you going to do with that man? This is a question which must frequently be answered, because a large proportion of old engineers have poor vision and sooner or later must face this problem. I think in laying down rules for the solution of such a question, that great latitude must be observed and the utmost paucity of vision, consistent with actual safety of train service, must be liberally computed. In making such calculations we should likewise remember that we can never be certain that we are correct in our deductions. We are simply expressing our own opinions aided by the opinions of others, but we have no way of knowing whether we are really right or wrong. Therefore, we should not be too dogmatic in our ideas or too intolerant of the opinions of others. We should not fail to remember that as a man wanes in age he also usually waxes in experience and good judgment, and what he lacks in vision and other physical attributes he makes up in other qualities, nearly if not quite as valuable. Many of the best and most trusted engineers on all roads unfortunately possess very poor vision, and yet get into very little trouble, not because their vision is so poor, but because they are ripe with practical experience and wisdom. Then comes the question of glasses, or in other words, shall old engineers be allowed to wear glasses when on duty when glasses are necessary to bring vision up to the accepted standard? I do not say "proper" standard, but "accepted" standard, because no one knows the limits of a "proper" standard for an old engineer. Please observe that I do not recommend the same degree of latitude for firemen that I do for engineers, for obvious reasons. Firemen are usually young men and have not had the experience and do not possess the ripe judgment of engineers. They should, of course, possess perfect eyes before they become firemen, and this same standard or a very small departure from it should obtain when their re-examination for promotion as engineer occurs. After they have actually become engineers, they are entitled to the latitude already referred to in this paper. I sometimes feel that the visual requirements of engineers should be graduated from time to time in accordance with their age and years of service on an engine, but this solution of the problem appears to complicate a situation which we are endeavoring to clarify and simplify. It therefore seems best to state what we believe to be the extreme limits of visual safety for old engineers in the requirements, and then trust in the good judgment, and, if I may use the expression, "horse sense" of the company surgeon or oculist to settle each individual case on its respective merits without indulging in hair-splitting technicalities.

But to return to the question of the advisability of allowing engineers to wear distance glasses when on duty. My own mind has undergone several revulsions of opinion on this important question, sometimes believing it best and at other times entertaining different views. I have noticed one thing, however, that my strictest views are in evidence when I look at the subject theoretically, and my most liberal views come to the surface when I am compelled to pass judgment on an individual case. I believe that no one will contradict the statement that a large proportion of engineers past 55 years of age would fail in a strict visual test for distance unless they could avail themselves of the assistance of glasses. This means that at the very time when engineers are most valuable to a railroad company—at the very age they may be considered the safest guardians of life and property—they may be discharged, because their vision has fallen one point below a prescribed theoretical standard; and although glasses can perhaps give them perfectly normal vision on both sides, they may not be worn. I understand all of the arguments against the use of

glasses. They become misty on cold and foggy days, sweaty on hot days, speckled with dirt and cinders; and yet when I come to judge on individual cases and see in my consulting room a fine looking manly man of perhaps 55 summers, erect in his bearing, with a fine long record for carefulness, skill, reliability and judgment, with no serious accident in his entire career of perhaps thirty years as an engineer for one company; with a family to support, and with absolutely nothing against him except a refractive error that lowers his visual capacity a little below the required standard, and whose vision can be restored to a normal, or nearly normal, standard by the use of glasses, I must say that the temptation is strong, and usually becomes overpowering, to give him the glasses and tell him to continue in his life's occupation, feeling that a man of this character can be trusted to take care of his glasses and keep out of trouble. I believe that most men here present would do the same; and if we have not the courage to live up to certain arbitrary rules, or if we conscientiously believe that such rules are too drastic, why not outline a wise and still liberal policy which we are willing to accept and then live up to it?

I question very much whether we have the right to enforce the requirements of overpowering character on old engineers at the present time. No strict requirements were in force years ago when these men were admitted to work for different roads. They were accepted with but little ceremony, and now they have grown old in the service, and I feel should be dealt with as leniently as is at all consistent with safety. It should, however, teach us that we can hardly be too strict in the admission of new men to the service, and I feel that no man should be allowed to commence work on an engine as a fireman, hoping some day to become an engineer, unless he is a practically perfect specimen of physical manhood, for we must remember that as years progress and age advances, physical infirmities become accentuated and the trifling defect of young manhood becomes the disqualifying condition of riper years. It is for this reason that I urge the non-acceptance of new firemen, who, notwithstanding that they possess a vision of 20/20 in each eye, yet have an apparent substantial hypermetropia of, let us say, one and one-half diopters, which, although easily overcome in young life by an active ciliary muscle, shows itself unmistakably as age advances and the muscle loses its power, under which circumstances vision drops to a lower and still lower standard until it becomes so poor that the man's occupation may be lost from a cause which, if detected on the entrance examination, would have saved him this bitter disappointment of his advancing years. In other words, in examining a man for his primary entrance to the service, we should look ahead many years.

Another phase of the matter which we can not afford to ignore is the labor problem. In these days of labor unions, when the removal of a single man, even though he is merely taken from one job and given another, is perhaps sufficient to tie up an entire railroad system and paralyze many industries, it may be well to be sure we are on safe grounds when we remove from his engine a superior engineer, even though he is simply shifted from one position to another, to which it is thought his physical defect better adapts him.

I would then recommend, for reasons already given, that the House of Delegates' report be further amended by inserting under "Class A" and also under the caption "Entrance to service or promotion," and after the words "20/20 in each eye, tested separately without glasses," the words "The applicant shall not possess more than one and one-half diopters of apparent hypermetropia."[1]

Under the heading of Class A, and under the caption "Re-examination of those in the service," I would recommend that all of the underlying words be stricken out and the idea of testing with both eyes open be done away with as being both inaccurate, misleading and unscientific, and the following words substituted:

Enginemen shall not be retained in their positions if vision sinks below 20/40 in one eye and 20/30 in the other, or 20/30 in one eye and 20/50 in the other. Distance glasses must be worn when on duty, provided such glasses are necessary in order to bring vision up to the required standard. Extreme indulgence and concessions shall only be made to old and trusted enginemen, at the discretion of the company surgeon, it being remembered that the best vision is desirable and that glasses are undesirable. Firemen shall not be eligible for promotion to enginemen if vision sinks below 20/20 in either eye without glasses, and shall not be retained as firemen if vision sinks below 20/30 in either eye without glasses. The whispered voice must be heard at not less than 15 feet in a quiet room.

Under the heading of Class B, "Re-examination of those in the service," in House of Delegates' report, instead of the words "20/40 with both eyes open," etc., I would suggest the words: "Employes shall not be retained in these positions if vision sinks below 20/40 in one eye and 20/30 in the other eye, or 20/20 in one eye and 20/50 in the other. Glasses must be worn if they are necessary to secure adequate vision. The whispered voice must be heard at not less than ten feet in a quiet room." I would suggest the same words in the same section of both Class C and Class D. I would recommend striking out entirely Section 7 in House of Delegates' report, as the points contained therein have been fully rehearsed before. On this account Section 8 should be called Section 7, Section 9 Section 8, and Section 10 Section 9.

I exceedingly dislike making these suggestions, which have developed into a good many, especially as I have in the past strongly advocated their general adoption. While recognizing their shortcomings, I am confident that as between the two reports the Section on Ophthalmology report is the better, and should not have been tampered with, as it was the deliberate result of the work of a conscientious Committee, extending over years, while the House of Delegates' report was the result of the quickly and illy considered debate of a few moments in the House of Delegates, where some little eloquence or personal influence goes a long ways in reaching results. I will gladly support either the Section on Ophthalmology report or the remodeled House of Delegates' report as contained in this paper. I am merely anxious to get some good and commendable movement thoroughly started in railroad circles, some ideas and instructions crystallized, which will be uniform throughout the length and breadth of this land and be accepted as a standard to work from. After this is accomplished, further improvements and advancements can be made, but we should be careful not to make our recommendations so strict and oppressive that they will be ignored.

1. If the applicant can have a +1.00 diopter lens placed in front of each eye, separately tested, without blurring his vision, he has one diopter of apparent hypermetropia. If a +1.25 or a +1.50 diopter lens does not blur his vision he has more than one diopter of apparent hypermetropia.

Before closing, I wish to enter a plea for the more general appointment of eye and ear surgeons on the different roads and the investing in them of broader responsibilities. I feel confident that if more roads and their general surgeons sought the intimate counsel of skillful and conservative eye and ear surgeons, both as to accidents, examinations and advice concerning the policy of the road in matters about which they are supposed to be especially interested, it would be better for all parties concerned; or in other words, to use the language of Mr. R. C. Richards, the experienced and efficient general claim agent of the Chicago & Northwestern Railway: "Why would it not be a good plan to spend a small portion of the money that is paid out every year for safety appliances in getting some safety employes?"

92 State Street.

THE BLUE LIGHT TREATMENT IN DISEASES OF THE SKIN.

LOUIS E. SCHMIDT, M.Sc., M.D.
CHICAGO.

Roswell Park has but recently stated that the *x*-ray treatment is in its infancy and that its true value cannot be estimated at the present time, but that it is a matter of the future. The entire field of light therapy is still in an experimental stage and necessarily the results of treatment are open to criticism. Certainly with so many careful and earnest workers as are in the field at present, the evidence as to their value is just a question of time. Because there is a variance of opinion,[1] due to variance in the results of different workers in the same class of cases, it is not courteous nor scientific to accuse individuals who have the spirit of investigation and scientific interest at heart, of dishonesty whenever the results are not as good as those of others. Neither should it be done if the results are better. This will also hold true of phototherapy. Certain forms of the latter mode of treatment have been in use for a much longer time than radiotherapy. However, not any single one method has been taken up with the same zest and interest as the *x*-ray method of treatment. Hence, as regards the number of cases treated there are but few compared to it, though the time which has elapsed is not sufficient to permit of final judgment as regards their value. On account of the similarity in action and results it may be pardonable to make some slight comparison. Other methods of phototherapy than the one mentioned in the title of this paper have been resurrected, others, devised but recently, have been brought forward into the field of therapeutics.

The red light treatment of Finsen was introduced almost fifteen years ago, but is now again in the experimental stage. Brilliant results were recorded in the first cases, but the latest investigators have failed to corroborate them, yet it is necessary to wait until further work has been done in this particular line. The red rays with which Finsen experimented undoubtedly have a tonic action on the nervous system; however, this form of treatment, in the diseases of the skin, depends on the exclusion of the chemical rays of the solar spectrum. Finsen, to be more exact, has shown in his studies of the acute exanthemata, good results. Yet numerous investigators have failed in the same class of cases, to observe good results with the method. These red rays can penetrate deeper into the tissue than the blue rays, as shown by many workers. The blue rays show a decided action on the vasomotor system, and apparently have a soothing effect on individuals suffering from excitement, just opposite to the action of the red rays.

There are certain recognized facts, for instance, antagonism between the colors of both ends of the spectrum, and demonstrated by the following: The phosphorescence caused by the blue rays are overcome by those of the red light. Here the extremes have the opposite action. It can not be expected that this remains true in every instance, but that their peculiar action show gradual differences. Finsen was the first to investigate the value of the light treatment and it was in connection with variola red light was used. Gen. Pleasanton, however, in an empirical manner, used blue light. The other colors of the spectrum have as yet not been used in phototherapy; certainly not in the field we are interested in.

Now as regards the topic under consideration. It was Minin who first used blue light, by using blue incandescent lamps and reflectors. Later it was modified until it attained its present form. Minin's, Marcus', and my own results have been obtained with the apparatus which I will describe. This consists of an arc lamp, back of which a reflector is placed. It is best to have a resistance box on whenever using the street current, in order to regulate the constancy of the light, which in our case is 5,000 candle-power. The reflector concentrates and throws the light on a screen, which consists of blue glass. The height of the screen can be regulated so that the desired parts of the patient, who is placed behind it, can be readily exposed. As the screen is of large size, large surfaces may be treated at the same time. In this it differs distinctly from the Finsen light treatment. The mode of treatment is as follows: It is not necessary to protect the healthy parts with metal sheets, as in *x*-ray work, when treating localized areas. Up to the present time no untoward effects have been noticed, though the entire body has been exposed. The parts exposed should be unprotected from clothing, etc. The distance from the screen should vary as to the case, depending on whether the heat rays should be used. The distance from the screen varies, therefore, from a few inches to a foot. As regards the length of time, this varies, depending on the distance, from a few minutes to thirty minutes, or even longer. The number of treatments differ, as in all other forms of light treatment. Some cases react readily, others react more slowly. Treatments may be given daily or twice daily for long periods of time. Here again it is not necessary to fear accumulative action as in the *x*-rays.

As regards the action of these particular rays after they have passed through the screen, they depend both on the heat and the color rays. The spectroscope shows the absorption of the red and yellow bands by the cobalt glass screen, while the blue and violet rays pass through. The ultraviolet also pass. The actinic action which accompanies the blue rays is much less than those accompanying the ultraviolet rays. Now as regards the action of the blue light? Are the blue rays of the spectrum bactericidal? Experiments of Bie and Finsen have shown that the action of the blue, violet and ultraviolet are the most powerful in the order named, hence this form of treatment should be considered favorably from this standpoint.

Which rays are accompanied by inflammatory reaction? According to the same investigators, they are the same rays that have a bactericidal reaction.

1. For these various views as to the relative merits and shortcomings of the various forms of phototherapy and radiotherapy the current literature will be found to give the ideas of the many investigators.

Both in the blue light and Finsen light treatment one other question must be considered, and it is, "how is it possible, in the easiest and best manner, to free the rays from the undesirable heat rays without destroying at the same time the bactericidal and inflammation-causing action of the light rays?" This question is answered, in both instances, in different ways. In the Finsen method, whether or not glass or quartz lenses are used, again whether electric or sun light and again whether in the cooling of the rays distilled water or colored water is used, which also considers the absorption of some of the colors of the spectrum. In the mode of treatment under consideration the distance of the screen from the reflector and again the distance of the part treated from the screen, play a part in answering the question. As to the clinical action of the rays in the blue light treatment it has been possible for me to observe, immediately after the commencement of treatment, the appearance of oozing serum from ulcers, which in some cases becomes copious, stimulation of surfaces of ulcers causing rapid cicatrization, analgesic effects to painful skin diseases, for presenting the same, but on account of the excellent improvement that I have seen in the cases treated, I have thought it advisable to bring this subject to the attention of those that are inclined to look into the subject, as I am made to believe that it may be of true value in a limited number of cases. The kind and details of the cases that I have treated can be seen from the following table.

A few words in regard to the possibilities. Holzknecht maintains that these rays can have no penetrating and curative power, unless when involving or destroying the uppermost or outer part of the body, or its integument. It is a fact, however, that with the Finsen method deep-seated tubercular nodules are favorably influenced, without involving the superficial strata.

Whenever taking up new methods there must be some ground for the same. The violet and ultraviolet rays were known to be anti-bacterial in action, but it was thought that the rays scarcely penetrated the epidermis. As authorities differ on this point it will be best to state that in all probability the blue and ultraviolet rays are

Number.	Name, Age, Sex.	Disease.	Treatment. Kind.	No.	Length of Each.	Space of Time.	Course.
1	H. H., 32, M.	Lupus vulgaris faciei et colli.	X-ray	105	3 to 15 minutes		For first few months apparent improvement, then but slight changes, for the new nodules constantly appearing, old areas however cicatrising.
1	" " "	Same as above	Blue light	15	15 "	27 days	Immediate effect for the better, no new nodules at the periphery stopping of the progress, cicatrization.
2	I. M., 60, M.	Lupus vulgaris sciei	X-ray	114	3 to 20 "		Dark bluish-red in color, distinct lupus nodules at periphery, much infiltration, great improvement but very slow.
2	" " "	Same as above	Blue light	17	10 to 20 "	30 days	Since commencement marked reduction of infiltrated condition, appearance much lighter in color, scarcely any scaling, no nodules at edges.
3	Miss W., 21, F.	Acne vulgaris faciei	X-ray	10	5 to 15 "	9 weeks	Slight dermatitis, but after a period of rest, increase of acne pustules, when treatment was again taken up; no appreciable change.
3	" " "	Same as above	Blue light	12	10 to 20 "	3 weeks	Patient felt immediate improvement, lessening of congestion, but few fresh acne pustules appearing after commencement of treatment.
4	F. B., 21, M.	Ulcus phagedenicus	" "	4	15 to 20 "	7 days	During course of first treatment pain lessened, appearance of ulcer immediately changed. Base granulating and healthy edges filling and healing.
5	D. H., 47, M.	Ulcus cruris	" "	6	15 to 20 "	2 weeks	Case of long standing. Treated antiseptically for months. After commencement of treatment almost immediate improvement. At end of two weeks seat of ulcer covered with epidermis.
6	A. K., 19, M.	Chron. vesicular papular eczema, both hands.	" "	15	10 to 20 "	3 weeks	Gradual but marked improvement. Vesicles after bursting apparently commenced to dry; scaling set in.
7	A. L., 30, M.	Carbuncle of neck	" "	21	10 to 20 "	4 weeks	Carbuncle size of silver dollar, marked lessening of pain, oozing of serum from broken-down tissue, rapid absorption of infiltration.
8	E. H., 22, F.	Acne vulgaris faciei	" "	14	10 to 15 "	5 weeks	During first few weeks, but few new pustules. Absorption of nodules.
9	A. B., 31, M	Acute eczema of the face.	" "	3	20 "	4 days	Lessening of edema, decrease of burning sensation and appearance of scaling.

and in some cases the allaying of severe itching, resorption of pustular and non-pustular nodules of the skin.

Minin reports favorable results in the treatment of painful bruises, hematomata, infiltrations, acute and chronic eczema, ulcers and burns. A large percentage were cured, in others he noticed great improvement. In addition, cases are cited where local anesthesia to the parts treated were produced, and later he used this as a method of local anesthesia, so that minor operations were made painless. Marcus has not been able to report such wonderful results as Minin, but nevertheless has found satisfaction with the method in numerous instances. On account of these reports the blue light treatment was instituted by myself in a number of cases which had been treated for an excessively long time with the *x*-ray, without any appreciable change, especially after the first few months of treatment. The changes after the first treatments were so marked that I can not fail to mention them here. These and other cases which I have treated in this manner will again be reported at a later date. On account of the limited work which has been done by myself in this field, I wish to be pardoned absorbed in the true derma. If this is true, and I am inclined to believe that it is, the penetration of the rays can account, by the action on the tissue, for the results attained.

To sum up blue light therapy it is necessary to consider:

1. Simplicity in the mode of application.
2. Large or small surfaces may be treated.
3. No untoward effects, especially no deep-seated burns, as in case of *x*-ray therapy
4. Results, comparing with other forms of light treatment.
5. Expense of apparatus.

Reading in Bed.—Almost every English medical journal has had its say on the subject of reading in bed, and the discussion has been mentioned in a few journals on this side of the water. The consensus of opinion is as follows: Under proper restrictions one may indulge in reading in bed without harm, the position of the reader should be upright, or nearly so, the subject matter should be not too exciting or absorbing, the light should be bright and properly placed, and every one who indulges in the habit should use moderation.

STRANGULATED FEMORAL HERNIA CONTAINING APPENDIX.

REPORT OF TWO CASES.*

J. HENRY BARBAT, PH.G., M.D.
Instructor in Surgery, Medical Department University of California.
SAN FRANCISCO.

Strangulated femoral hernia with the appendix alone as the contents is of sufficient rarity to report. In the literature I find reports of about 100 cases in which the appendix was found in femoral herniæ, but in only a few of these was the appendix the sole occupant of the hernial sac, and in only one or two has a primary strangulation of the appendix occurred. In most cases the appendix was found as a passive occupant of the sac, sometimes accompanying the cecum in its descent, and at other times projecting through the ring with a separate loop of bowel or piece of omentum. In order that the appendix may pass through the hernial ring it must be free in the abdominal cavity and possess a meso-appendix sufficiently long and lax to allow its descent. No case has been reported in which the appendix was found in a left femoral hernia.

CASE 1.—My first case was Mrs. D., aged 66 years, who had been in good health for many years with the exception of a lump in the right groin which had been noticed for nine years, but which had given no particular trouble. Though occasionally it was tender on pressure, there never was enough discomfort to necessitate the services of a physician until the present attack. The patient was first seen by Dr. William N. Sullivan, who found that she had been suffering for three days from pain and tenderness over the mass in the groin. There was no vomiting or hiccough; pulse 85, temperature 100 F. I saw the case the next day in consultation, and found an inflammatory mass about two inches in diameter exceedingly tender to the touch situated directly over the right saphenous opening.

I made a diagnosis of either infected inguinal glands or a strangulated omental femoral hernia. The patient was removed to the hospital and operated on immediately. When the sac was opened about half an ounce of bad-smelling sero-sanguineous pus ran out. The contents of the sac consisted of the appendix, which was large, inflamed, and had a large perforation near the tip; an appendolith, which was lying in a small circumscribed abscess, and the meso-appendix, which was much hypertrophied from its long stay outside of the abdominal cavity. The whole mass was separated from the sac wall to which it was firmly adherent up to the ring, where it was found that the adhesions were so firm that it was not safe to attempt to liberate them, so the appendix and its mesentery were ligated *en masse*, removed, and the stump touched with pure carbolic acid. The cavity was drained with gauze. It closed rapidly, and the patient went home in three weeks. In this case no attempt was made to close the hernial opening because the stump formed an impassable barrier to any future hernia, and any such attempt would have been followed by failure on account of the infection. The appendix must have descended at the beginning of the trouble and during its long incumbency became firmly adherent to the femoral canal. Whether the concretion had started previous to the hernia or not can not be stated, but from its size and consistency it had certainly increased materially during the past few years.

The strangulation in this, as in most similar cases, was secondary and due to the swelling which followed the inflammation of the appendix; and from the condition of the structures in the femoral canal it would take very little swelling of the appendix to cut off the circulation and produce necrosis.

CASE 2.—Mrs. C., aged 69 years, had had good health previously with the exception of backache, which was worse when she was sitting than when standing or walking. She had never noticed any disturbance in the groin at any time. She woke up one morning feeling perfectly well, and prepared the breakfast. During the meal she was seized with cramps and a bearing-down pain in the lower abdomen, more on the right side. She went to bed immediately and discovered a small lump in the right groin. She called her husband's attention to it, and he, having a rupture himself, thought that his wife's condition was similar to his own, and tried to reduce the mass by rubbing, but without success. Hot bags and other local applications were also tried.

I saw the case at 7 p. m., just twelve hours after the onset, and found the patient suffering intense spasmodic pain in the right groin, radiating up to the abdomen and back. The pain in the back caused more distress than the others. I mention this particularly because I believe that the backache which she had previously was due to the dragging on the meso-appendix during the formation of the hernia, which I think existed some time before its discovery, but which had never been apparent on account of the thick layer of fat. The patient had vomited once shortly after the beginning of the attack. The temperature was 101 F. and the pulse 100.

Examination disclosed a small mass about one and one-half inches in diameter just below Poupart's ligament, and directly over the saphenous opening, which was very tender and hard. I made a diagnosis of strangulated femoral hernia, and had the patient removed to the hospital at once for operation. When the sac was opened about two drams of odorless bloody serum ran out. It was seen at a glance that the contents of the sac consisted of the appendix doubled on itself and strangulated at the external ring. The tip was above the constriction and could not be pulled down until the ring was cut through, when the whole appendix could be pulled down with ease.

An interesting feature here presented itself: it was found that the tip of the appendix was almost gangrenous, while the rest was only intensely injected, showing that the double constriction had caused an earlier strangulation than the single constriction near the base. By carefully pulling on the appendix the cecum was drawn through the ring, the appendix removed in the usual manner, and the stump inverted according to Dawbarn. The femoral canal was closed by passing a few chromicized catgut sutures from the pectineal fascia to the under surface of Poupart's ligament, and the external wound closed in tiers. Recovery was perfect.

590 Sutter Street.

* Read at the September meeting of the California Academy of Medicine.

Clinical Report.

A CASE OF UNDESCENDED TESTICLE.

FRANK EUGENE PILCHER, M.D.
DETROIT.

The scarcity of literature on the subject of undescended testicles leads me to believe that possibly many cases are overlooked. The article of Dr. Bevan[1] on this subject is not only timely but very interesting and instructive, as it shows very clearly the technic of this operation, which in most cases is so important for the full development of the male child.

I agree perfectly with Dr. Bevan that the rule should be to operate and transplant to its normal position in the scrotum every undescended testicle which can be palpated. I also believe that every case of undescended testicle at the age of puberty should be operated on. The operation should be done as early as possible, and in every case before the age of 19. In several cases I have made the operation much as Dr. Bevan suggests, and in each case have had most satisfactory results. They were, however, with the single exception given below, under the age of 17.

History.—Walter W. aged 28, unmarried, called on me Feb. 15, 1902, complaining of a nervous condition which was

1. THE JOURNAL A. M. A., Sept. 19, 1903.

rapidly growing worse, and seemed almost beyond endurance. For some time he had been under the care of different physicians of good standing, and for the past three years had been given almost constant treatment for stomach trouble, all to no purpose. During his first visit the following information was obtained. He was of an extremely nervous and excitable temperament, and had been so from his earliest recollections; decidedly feminine in his actions, choosing rather to do fancy work, housework or sewing to the more laborious occupations of his companions. The nervous condition had increased with years, and since the age of 18 had grown worse more rapidly. Spells of a mild form of melancholia were of frequent occurrence, but the one particular source of trouble was the stomach; he was very "fussy" about his diet, and quite as unreliable. It frequently happened that food prepared according to his directions would be refused when brought before him, a sudden nausea coming over the patient, making it impossible for food of any kind to be taken. Often after partaking of a well-cooked and properly served meal he would leave the table suffering a severe headache, and soon after be taken with vomiting, expelling the contents of the stomach in an undigested condition. Another symptom which was always present, differing only in severity, was pain of a sharp, shooting character through the abdomen, causing much suffering, and at times compelling him to remain away from work, frequently making it necessary to remain in bed for a few days. His nights were almost sleepless. What little sleep he had was disturbed by nervous twitchings, bad dreams, sudden starts or jumps, moanings, often shouting and delirium.

Feb. 20, 1902, I was summoned hastily, being told that Walter was having a high fever and bad nervous spells, which had lasted for two days. Arriving at his rooms, the following condition presented itself: He was in a delirium of a somewhat violent type, did not recognize me and seemed unable to recognize his attendants or intimate friends. Medicines were positively refused, food likewise. Vomiting at first of undigested food, later of mucus, frequently occurred. It was impossible to keep him quiet, he would jump, toss and roll about the bed manifesting every symptom of severe pain. At times he would, in spite of restraint, jump out of bed shouting and crying as though persecuted by evil spirits. I was told that this was no uncommon condition (only perhaps worse) as it often followed an extra exertion, over-fatigue or undue excitement.

I called the following morning and found him much improved, although suffering in the same way at less frequent intervals. During his sane moments he could remember nothing of what had taken place during the delirium. In the afternoon of the second day, vomiting occurred, and improvement gradually followed. On the fourth day, all unfavorable symptoms subsided and he seemed to be as well as before the attack.

Shortly after this he left the city and I did not see him again until the following July, when he called at my office. All the symptoms above mentioned had grown worse, and some new ones had been added. Dizziness of a decided character was more or less constant, making him rather frightened to venture away from home. A temporary loss of mental faculties was probably at this time the most pronounced of the newer symptoms, for instance, he would leave some place for home, and perhaps, when he recovered consciousness would find himself some miles away from his destination, probably having gone in the opposite direction, and having not the least conception of when he got there. Music had at all times been the source of his greatest pleasure, and was the one thing of which he seemed never to tire, but now all was changed, he cared nothing for it, and usually it was very distasteful, often causing feelings of a depressing nature. Without warning and with no regard to surroundings he would break out into most hysterical and violent fits of crying, which seemed beyond his control. Instead of enjoying companionship as in the past, he dreaded meeting even his most intimate friends.

Diagnosis.—A satisfactory diagnosis had not yet been made by me. Further inquiry into the family and personal history revealed nothing of interest. I made very careful inquiry about the genitals, but could obtain no information that would in the least aid me. He had been circumcised a year before coming under my care. The time was now at hand either to give up as unable to cope with his complaint or to ascertain the cause and remove it. I demanded a thorough physical examination, telling him to remove all clothing, whereon strong objections were made, but as no objections would stand, and nothing short of the most rigid examination would satisfy me, he volunteered the information that he had no testicles and never had had any. At last here was the cause for which we had sought, and inspection failed to locate them. By palpation it was ascertained they were high up in the canal, the left one about three-fourths normal size, hard and painful, the right one more nearly natural size, very hard and extremely painful. Both were immovable. Palpation caused much suffering and a decided increase in all the nervous symptoms. I advised immediate operation.

Operation.—Sept. 2, 1902, the patient was admitted to the hospital, and on the following day the operation was performed. I had expected to follow the plan of procedure suggested by Dr. Bevan, but it was necessary to abandon this for the following reasons: When the sac was opened the testicle was found bound down by strong bands of adhesions, and only by the most patient work could the organ be freed enough to move it from its resting place. The cord could not be lengthened even by repeated efforts, and no better results were obtainable after some of the tense bands of connective tissue were severed. Careful dissection helped to free the testicle enough to lift it out of its bed. My original plan of bringing the organs down into the scrotum had to be abandoned and with some difficulty the ligatures were placed about the vaginal process and spermatic cord, each being treated separately. Then the organ was removed. The right testicle was treated in the same manner, as I found the conditions a counterpart of the left. The wounds were closed by buried catgut sutures and the skin incisions by interrupted silkwork sutures without drainage, the usual aseptic dressings being applied.

After the first 48 hours he suffered no pain, all nervous symptoms having disappeared. Gradually the appetite improved and soon he indulged in all varieties of food with no unpleasant results. On the tenth day the silkworm sutures were removed and three weeks after operaton he left the hospital well. At the present time, one year after operation, he is in perfect health, having had no return of the mental or nervous symptoms, and has gained in weight and strength.

From my experience with this case it seems to me that possibly this cause is sometimes overlooked in the diagnosis and treatment of nervous troubles.

1300 Grand River Avenue.

Rabies vs. Diphtheria.—I. Prieto of Mexico mentions a case that occurred in the practice of G. Fabela in which a man was bitten by an animal supposed to be rabid. Four or five weeks afterward the man exhibited symptoms of hydrophobia, rapidly progressive. The physician diagnosed the case as hydrophobia, but ventured to inject antidiphtheria serum, knowing that it had sometimes displayed efficacy in diseases other than diphtheria. To his surprise the symptoms of hydrophobia promptly subsided and the patient recovered. Prieto himself had occasion to treat a case of hydrophobia two years ago, which had developed subsequent to a dog bite on the hand. The dog was a young, intelligent, great Dane, apparently in perfect health at the time and ever since. The case was diagnosed as nervous hydrophobia, with a favorable prognosis, but the patient rapidly succumbed with the typical picture of hydrophobia. In all his experience Prieto has never known a case of an animal's recovering from rabies. He compares this case with the one reported by Head and Wilson, in which the symptoms were those of hydrophobia, but the bacilli discovered were diphtheria germs. From all these facts Prieto deduces that the diphtheria bacillus is able to induce a symptom-complex in man exactly similar to that of hydrophobia, and it is more than probable that many cases of supposed hydrophobia were in reality this hydrophobic form of diphtheria. His article is published in the *Gaceta Medica*, the organ of the Academia Nacional de Medicina of Mexico, January 15, 1903.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, FEBRUARY 27, 1904.

THE CLINICAL STUDY OF DIABETES.

Last week[1] we emphasized the necessity for individualization in the directions to be given to diabetic patients, and urged that the method of treatment should be elected in accordance with the form of disturbance of sugar metabolism present. Our comments were founded mainly on the discussion[2] of the subject at the New Orleans session of the American Medical Association. In the symposium on diabetes at the recent meeting of the Medical Society of the State of New York,[3] this principle of the necessity for treating the individual affected with diabetes and not the diabetes itself, was emphasized by two such excellent therapeutists as Dr. William H. Thompson and Dr. Frederick C. Shattuck. In addition, however, some novel suggestions were advanced with regard to the necessity for more careful clinical differentiation of the varying forms, not alone as regards the "mildness" or "severity" of diabetes, but as to the particular type of failure to use carbohydrates which is present in each case. Dr. David Edsall[4] of Philadelphia, in a paper read on the "Physiologic Chemistry of Diabetes," called particular attention to the fact that it is not the power of using all starchy material which diabetic patients have lost, but that of properly elaborating—metabolizing, so to say—certain forms of starch which occur in an ordinary diet. No two patients are exactly alike in this regard, and the term diabetes, in its strict etymologic meaning, that unused material goes through the body and its limitation then to the tendency of sugar to *run through* the system without accomplishing its purpose, is unwarranted by the results of careful investigation.

Recent observations have shown that where the faculty to metabolize dextrose has been entirely lost, levulose (the form of sugar which turns the axis of a ray of light to the left) may still be ingested in certain cases in considerable quantities without any anomalous results. Some of the other isomeric forms of sugar may also prove innocuous for metabolism, even though dextrose can not be employed to any appreciable extent. At first, these observations were taken entirely as encouragements to look for unusual forms of sugary material that might possibly supply for the waste induced by the failure to use dextrose. Now, however, has come the thought that this should lead rather to further study of the special form of diabetes, or, in other words, the special form of failure to use sugary material from which an individual patient may be suffering.

It is not alone by delicate chemical differences that diabetic patients need to be separated into classes. Much cruder evidence of individual differences as regards starch, digestion and sugar metabolism may be found without the necessity either for detailed chemical knowledge or for refined laboratory methods. It is now known that some patients suffering from diabetes are able to use bread with much more impunity than others, while again some patients find that the starch obtained from potatoes is comparatively innoxious to them. Recently, von Noorden[5] has shown that a large number of diabetic patients can take oatmeal and be benefited by it, when other starchy products are sure to cause deterioration of their diabetes. It is probable that these individual differences, with regard to the power to use certain starchy materials, will be found to be much more complex than even this initial sketch would seem to indicate.

Dr. Edsall added that it is not impossible that there is a special ferment for each form of sugar, and that every kind of starch from every different vegetable is acted on differently before it is ready for use in metabolism. The old idea of starch digestion and absorption was simply that of conversion into sugar and then solution in the blood serum, from which it was absorbed in the muscles and liver for the various purposes for which it was needed. Physiology is, however, by no means the simple set of processes that it used to be considered. Dr. Edsall suggested that, as Ehrlich's theory of immunity demands the existence of many different kinds of receptors on the cells, a different one for each kind of infectious material that invades the body, so it may not be too much to look for a special kind of ferment for each of the various modes of starch, and that diabetes, like immunity, instead of being a simple process, is extremely complex.

In a word, the physiologic chemist has come back to the clinician for more data. Diabetes, far from being a simple form of disturbance of metabolism, is probably a very complex affection, with perhaps very different causes in different cases. The physiologic chemist has not solved the problem of diabetes, as it was so long hoped he would, but he has found that the clinical observer has not used the opportunities at hand for the differentiation of the affection into types of disease, some of which are much more easy of treatment than others. This return of the laboratory worker to the clinic is being noted along many lines in the study of nosology. Study at the bedside has been too much neglected of late years, and the result is apparently a serious setback for progress in medicine.

1. THE JOURNAL A. M. A., Feb. 20, 1904, p. 536.
2. Ibid., Jan. 2, 1904, pp. 21 to 23.
3. Ibid., Feb. 6, 1904, p. 391.
4. See abstract in Medical News, Jan. 30, 1904.

See abstract in THE JOURNAL, xli, p. 1374.

THE ETIOLOGY OF RHEUMATIC FEVER.

The recent work of Shaw[1] again calls attention to the problem of the microbic etiology of acute articular rheumatism or acute rheumatic fever. This has been a vexed problem for many reasons. As will have become apparent to the readers of THE JOURNAL in which this subject has been discussed many times, there have been various views held as to the cause, some proceeding from a purely *a priori* standpoint, others based on more or less imperfect evidence. The older view that a metabolic or autotoxic process was responsible has latterly been largely supplanted by the microbic intoxication or infection theory, having as its basis the analogies found in other infectious diseases and also certain bacteriologic findings. The views which have been held concerning the microbic cause are: 1, That it is a toxic disease caused by the absorption of bacterial toxins from a local point of infection (presumably the throat); 2, that it is microbic but not specific, more than one micro-organism being able to cause the disease (staphylococci and streptococci especially); 3, the now almost abandoned idea that the large anthrax-like bacillus of Achalme is the cause; 4, that a diplo-streptococcus is the cause; and 5, a specific micro-organism suspected, but its nature not known or proved.

Staphylococci have been recovered from cases of rheumatism by Guttman (1892), Sahli (1892), Singer (1894); staphylococci and streptococci by Singer; the bacillus of Achalme by Achalme (1891), Thiroloux (1897), and Triboulet and Coyon in two cases; streptococci, or a diplococcus considered to be a form of alteration of the streptococcus, by Netter (1892), Dana (1894), Charrin (1894), Buss (1894), Triboulet and Coyon in five cases, Apert and Triboulet in eleven cases, Westphal, Wasserman and Malkoff in one case, Poynton and Paine (1900) in eight cases, Beaton and Walker (1903) in fifteen cases. Menzer has also recently carried on extensive investigations in serum therapy with streptococci cultivated from the tonsils of rheumatic fever patients. It is thus seen that evidence has accumulated in favor of the streptococcus (diplococcus) etiology of the disease. Animal experimentation has also been encouraging with this organism as derived from a number of sources, particularly with inoculations into rabbits. Triboulet obtained changes in the endocardium, pericardium and joints similar to those found in man in rheumatic arthritis. Wasserman, in a remarkable series of eighty rabbits, obtained similar lesions with a streptococcus cultivated from a case of post-rheumatic chorea. The experiments of Poynton and Paine, Beaton and Walker, and finally of Shaw, have been confirmatory. In studying the reports of the disease as produced in rabbits, its close resemblance to the rheumatic fever of man, both in the essential lesions and in the so-called complications, is striking. The arthritis is wandering and non-purulent, and the valvulitis, endocarditis, pericarditis, myocarditis and pleuritis are said to be identical with the similar human lesions. One of Shaw's rabbits developed an acute iritis on two occasions. The micro-organism has been recultivated from all these foci, and in several instances the disease again produced by inoculation of the secondary cultures into other animals. Shaw performed two apparently successful inoculations on monkeys.

Confidence is transformed into confusion to a certain extent when one turns from these results to the report on 270 cases of acute articular rheumatism occurring in the Johns Hopkins Hospital,[2] where the cultural attempts were almost uniformly unsuccessful. It seems improbable that the disease could have one cause in England and another in America, but it is quite possible that differences in technic or culture media would explain the radically different results.

Although the results quoted above seem very promising, experience dictates that a certain amount of reserve is indicated in regard to them. The possibility of a secondary contaminating microbe occurring more or less constantly in a disease must always be kept in mind. The confusion caused by streptococci in the circulating blood in scarlet fever serves to emphasize this possibility. Then, again, while the reproduction of the disease in an animal experiment is of the utmost confirmatory value in establishing the microbic etiology of a disease, it can not be considered proof positive in all cases. We can never assume that the susceptibility of one animal will be equal in degree or character to that of another; the animal may not be susceptible at all, or the reaction may involve entirely different tissues. On the other hand, this test has at times been apparently successful, and still wrong conclusions drawn, as the results of animal experiments with various micro-organisms cultivated from syphilis testify.

While these criticisms may not hold eventually in regard to the diplococcus of rheumatic fever, the negative results among the Johns Hopkins cases make further confirmatory work necessary. It would seem that the optimum culture medium should be determined, likewise the optimum period of the disease for obtaining cultures.

1. Jour. of Path. and Bact., 1903, ix, 158.

ALBUMINURIA OF PUBERTY.

Albuminuria in small amount may appear inconstantly in the urine under so many varied circumstances that its discovery fails to arouse the concern that otherwise it would. Nevertheless, the underlying cause should, so far as possible, be sought out and corrected. The mere presence of albumin in the urine, without other evidence of disease of the kidneys or their adnexa, may be considered a functional disturbance indicative of renal insufficiency, which, in itself, may be attended with no injurious effects, but whose existence should raise a question as to the vulnerability of the organs concerned. In order, therefore, to avert more serious

2. McCrae: THE JOURNAL A. M. A., 1903, xl, 211.

disorder, the urine should be examined with systematic regularity, both chemically and microscopically.

The qualification physiologic, as applied to albuminuria, does not seem entirely appropriate, as the fact of the condition being the exception rather than the rule indicates the contrary. There has also been described a form of albuminuria occurring at puberty and attributed to developmental conditions, as contradistinguished from the former, which has been attributed to constitutional conditions. In the course of observations made on 587 young men between the ages of 14 and 18 years employed as apprentices in the glass works at Jena, Dr. Felix Lommel[1] found albumin in the urine of 111. All were surrounded by favorable hygienic conditions. In some instances but a single examination was made; in others the examinations covered a period of from one to two years; while in the majority they covered a period of three or four years. Careful inquiry was made into the family and personal history.

In the overwhelming majority of cases the albuminuria was intermittent. Thus, in 90 cases in which the urine yielded a positive reaction, 436 examinations were made, albumin being found 164 times. Altogether, 2,220 examinations were made. The boiling test was employed at first, but later acetic acid and potassium ferrocyanid were the reagents used as being more delicate. The amount of albumin in the urine, as a rule, was exceedingly small; exceptionally it was considerable. Frequently it was from 0.5 to 1 per cent.; exceptionally more. Generally there was no sediment, or after prolonged centrifugation hyaline tube-casts and fatty degenerated epithelial cells were rarely found.

The albuminuria of puberty has been attributed in part to a depraved state of the blood, in part to a slight degree of cardiac insufficiency, with a tendency to stasis—abnormal conditions related to puberty and dependent on disparity between growth of structure and development of function at this time. Of 90 of the cases of albuminuria, the heart presented some abnormality in 38. In 13, enlargement of the heart to the left was found on percussion and palpation, associated with a heaving apex-beat, increased pulse-tension, systolic murmurs and accentuation of the aortic second sound. In 11 cases no enlargement of the heart was demonstrable physically, but the apex-beat exhibited increased resistance. In 9 cases a systolic murmur was audible; in the remainder there was persistent tachycardia and an increased area of cardiac dullness to the right. Similar conditions were found, however, in 29 cases unattended with albuminuria, so that the opinion is expressed that both the albuminuria and the cardiac disorder are manifestations of imperfect adaptation to the altered conditions of puberty. Violent physical activity was excluded as a possible cause of the albuminuria, which in many, however, may have been of orthostatic origin. Albuminuria was found only exceptionally in older employes under otherwise similar conditions.

A knowledge of the occurrence of functional albuminuria at the time of puberty may be of great importance in the differential diagnosis of chronic interstitial nephritis. Long-continued observation and a careful history are useful in this connection. Further, it should be borne in mind that in cases of albuminuria of puberty, the appearance of albumin in the urine is intermittent, and the amount of albumin rarely exceeds 1 per cent., while the presence of epithelial and granular tube-casts is indicative of the existence of nephritis. In doubtful cases, ophthalmoscopic examination may yield decisive information. An important lesson to be learned from the foregoing observations is that infallible significance should not be attached to hypertrophy of the left side of the heart and increased pulse-tension in the differential diagnosis of chronic interstitial nephritis.

1. Deutsches Archiv für klinische Medicin, vol. lxxix, Nos. 5-6, p. 541.

THE STAND OF AN ORGANIZED PROFESSION IN GERMANY.

An interesting war has been in progress in Germany for many months. We have had much to say in our news columns concerning this conflict between the medical profession and the semi-official sick benefit and insurance societies (*Krankenkassen*). These workingmen's organizations are authorized and controlled to a certain extent by the government, and membership is compulsory. Recently, it appears, the law was changed doubling the length of time for which the members are entitled to medical treatment in case of sickness; and attempts have been made by the *Krankenkassen* to further reduce the compensation of the physicians, already ridiculously low. The result has been that the refusal of the physicians to serve under these conditions, which had been the result in one city, has extended to many other localities. The late numbers of our German exchanges contain standing advertisements warning physicians against taking positions in these *Krankenkassen*. In a few cases outsiders have assumed the work, but such have been few, and a recent development of the case is that the government itself has had to interfere. In the city of Cologne, for example, where the number of physicians obtained from the outside was very much less than the ratio established by law, the societies have been informed that they must immediately fill the quota. Being unable to do this, they have been obliged to discharge their outside employed physicians and take back the original ones on the terms demanded.

The German physicians have our fullest sympathy in their contest against the oppressive treatment by the workingmen's societies. The ideal for which they are striving in their dispute is the *Freie Arztwahl*, the privilege of free choice of physicians as opposed to the present contract system, and they compliment us by calling this the American plan. There is no sentimental ele-

ment here that can be used in favor of the laboring classes. They act as do the most grasping and heartless monopolies and even outdo them in oppression. Human nature is much the same in all classes; if the workingman has the chance to oppress, he will take advantage of it to the fullest extent, as is seen in our own country. There is no reason why an honored and learned profession should be sweated in this outrageous way. The facts, as they come to us, are a warning for us to do all that we can to prevent the evil of club practice being introduced in this country.

Apropos to this subject, we may mention another peculiar situation which recently occurred in Germany, somewhat different from the one above mentioned. In Wiesbaden the physicians attending and acting in a local post-graduate course which was established by the government considered themselves grossly insulted by one of the medical government officials. The result was a most decided protest and a refusal to take part in the organization either as attendants or lecturers; and the offending official was ultimately obliged to make the best of his unfortunate position and resign. Experience will ultimately teach those whom it most concerns that our German confrères are altogether too gritty and are getting to be too well organized to be successfully ground between the lower and upper millstones of workingmen's *Krankenkassen* and arrogant officialism.

THE PROPOSED REORGANIZATION OF THE ARMY MEDICAL DEPARTMENT.

We publish elsewhere in THE JOURNAL[1] an account of the legislation now pending in Congress in regard to the Army Medical Department. It is well known to the profession that the status of the Army Medical Department, especially as regards the chances for promotion, is not at all satisfactory. The result is that there have been fewer applications for admission to the body and a larger number of resignations. To make the service more attractive and better able to meet the needs of the Army, a bill[1] has been introduced which provides for a reasonable number of physicians of the higher grades, thus removing the objections which exist in the present condition of affairs. Another important change of especial interest to the profession is that which provides for an army medical reserve corps. This will open a field for ambitious students, and give them at once a certain authorized medical status and the assurance of an army rank in case of war, provided they wish to accept it. This provision of the bill will be a popular one, and will have effects perhaps more beneficial and far-reaching than have been anticipated. The opportunity which is provided for instruction in the Army Medical School when there are vacancies, is itself a very desirable feature, which, we believe, will add to the attractions of the service, and the value of such a corps to the nation in case of emergency can not well be overestimated. We trust that our readers will use their influence to further this legislation so far as it is possible for them to do so. It is gratifying that the War Department takes the enlightened view of the subject that it does.

1. See page 605 of this issue.

IN THE FIELD OF MEDICAL JOURNALISM.

With the new year a number of changes in medical journals are to be noted. Some have succumbed in the struggle to make ends meet, some have been merged into others, and in some communities new journals have come into being to aid the spread of medical science among the members of the profession. Among the latter are the *Los Angeles Medical Journal* and the *Medical Reporter*, the latter being from Shreveport, La. If one may judge by the first few numbers of these monthlies, they will be of value to the local profession, in the broad but practical scope of their contents. We have often referred to the shortsightedness of the practitioner who does not take, or who fails to read, at least one weekly scientific medical journal, national in character, that he may keep up with the current practice of his profession. At the same time, he should take his local publication and support it enthusiastically. Such a journal has a sphere of usefulness as a representative of the physicians and as the mouthpiece of the organized profession of the territory it covers. Where two or more journals draw for support from the same field, consolidation will avoid waste and make for a better journal. It may reduce the number of editors, but it will benefit the readers and the profession as a whole. There are a few exceptions where rivalry is a stimulus to excellence. The value of consolidation is recognized in the recent merging of the *Medical Dial* into the *Northwestern Lancet*, these two journals having for some time occupied the same field in Minnesota. Both of these journals have been very ably edited, and the *Lancet* should now be better than ever. The *Journal of the Kansas State Medical Society* has absorbed the *Wichita Medical Journal* and the *Western Medical Journal*. This leaves only one medical journal in Kansas, and though a small publication, it is an able and wide-awake representative of the profession of the state. Quality is preferable to quantity, and growth will follow. Among other changes we note the suspension of the *Journal of Tuberculosis*, and the consolidation of the *Archives of Pediatrics* and the *International Medical Magazine* under the name of the former.

SUPPRESSION OF A MEDICAL MEETING.

The antituberculosis crusade prevailing throughout the civilized world has had an unexpected effect in at least one quarter. According to correspondence in the London *Lancet*, a medical convention held last month in St. Petersburg was dispersed by the police. This sounds rather strange to us, but it seems to be the order of things in Russia. The medical men present, in their zeal for the suppression of the tuberculosis scourge, demanded freedom of speech and of instruction by newspapers and lectures, a demand which the Czar or the powers behind his throne considered subject for police interference. It is possible, the correspondent says, to give lectures on hygiene, ventilation, etc., in Russia, but any systematic attempt at this falls under the suspicion of the police, some political motive is suspected,

and the scientific lecturer on sanitation may find himself banished to Siberia. The convention, however, did more than to ask for the education of the public. The evils of overcrowding, which are so obvious in relation to the subject of tuberculosis, were especially emphasized as occurring in the crowded ghettos of the Jews. There are some 5,000,000 Jews, it is estimated, in Russia, and those who inhabit the larger towns are compelled to live in special quarters, cut off from fresh air and country life. The artificial concentration of the Jews in the special quarters allowed them is an evil that the hygienists felt called on to notice. In the present state of the official mind it was only a provocation, the result of which is shown as above. We do not wish to prejudice anybody against the Russians or Russian administration at the present time, but it is very unfortunate that such an event as the suppression of a scientific congress for simply doing what every scientific physician must consider was its duty should have occurred. As the *Lancet* correspondent remarks, whenever practitioners of Russia assemble and touch on such subjects, they are accused of dabbling in politics, and it is fortunate if some of them are not arrested and imprisoned. "How medical science and sanitation can progress under such conditions is a question that the Russian government must be left to answer."

DECAYING FISH AND LEPROSY.

Dr Jonathan Hutchinson's theory that the eating of badly preserved fish is the chief, or, indeed, almost the sole cause of leprosy, recently has been revived in a number of the daily newspapers. For this reason it may be well to refer to some work that has been done in this connection. Professor Hansen of Norway, the discoverer of the bacillus of leprosy, tried for several years to find the lepra bacillus in tainted or fresh fish. He also tried to determine the possibility of such material being a source of leprosy in any way. His investigations were apparently without success. Except Dr. Hutchinson himself, there is no authority on leprosy, so far as we know, who advocates the theory. Dr. Isadore Dyer of New Orleans, who is our American expert on leprosy, having ample opportunity for the study of the disease among the lepers of Louisiana, has investigated the possibility of Dr. Hutchinson's theory being true, and continues to pronounce against it as he did during the lepra conference at Berlin in 1897. During last year a number of English and Anglo-Indian physicians, who have been studying leprosy in India, gave their opinions with regard to the dried-fish theory of the origin of leprosy. One of them brought forward the details of 102 cases of leprosy which had occurred in patients who had in India lived exclusively on rice, and who had never tasted fish. Dr. William Hynsey, who is very well known as a conservative observer and distinguished medical authority in India, declares that though dried fish is used universally all over the island of Ceylon, leprosy is confined to a few scattered villages along the coast. If fish in a poor state of preservation were the cause of leprosy, then the disease should be much more common in the interior, the fish becoming tainted during carriage inland, owing to primitive methods of curing. It is just there, however, that leprosy does not exist at all. Dr. Hutchinson's theory has been before the public now for many years. Ever since the discovery of the bacillus of leprosy, observers in many parts of the world have been striving to find the bacillus in fish. Almost needless to say, it would be one of the landmark discoveries of all time if it should be found there, and would mean enduring fame for the discoverer. Notwithstanding the stimulus to investigation that such considerations afford, no sign of the bacillus of leprosy, either in fresh or tainted fish, has ever been discovered. Dr. Hutchinson confesses that such a discovery must eventually be the crucial test of his theory, and he looks forward with confidence to the time when the micro-organism shall be found as a parasite of spoiling fish. He has been thus expectantly looking forward, however, for over a decade of years now, and not the slightest confirmation of his theory has come. The whole discussion in the newspapers is a bit of that popular science that unfortunately sometimes attracts attention to subjects that deserve not to be mentioned at all. The abuse of the fish diet, however, as regards the use of decaying fish, is not a matter we are now discussing. Its causation of temporary disorders is evident, and it may easily be a predisposing factor in many serious diseases.

Medical News.

(THE JOURNAL goes to press Wednesday morning.)

ILLINOIS.

Hospital Day in Evanston.—February 14 was "Hospital Day" in Evanston churches, and about $6,500 was subscribed for the support of the Evanston Hospital for the current year.

Improved Medical Service.—The medical staff of Cook County Institutions, Dunning, has been increased by five. The consulting staff will be composed of one specialist each in internal medicine, tuberculosis, insanity, pathology and surgery.

Society Donates Library.—The Peoria Medical Society has offered its library of about 1,000 volumes to the Peoria Public Library on the condition that they be placed in a separate room and constitute a medical department of the library.

Personal.—Dr. and Mrs. Frederick W. Werner, Joliet, start to-day for a tour of Mexico and California. They will return in about a month.——Dr. Nicholas Senn, Chicago, has been made a corresponding member of the Surgical Society of Paris.——Dr. and Mrs. John B. Murphy, Chicago, have gone to California.

Chicago.

Perilous Economy.—The finance committee of the city council has denied the requests of the health commissioner for increases of $15,000 for vaccination expenses; $10,000 for antitoxin; $32,000 for more sanitary inspectors, and $2,500 for more tenement-house inspectors.

Pneumonia and Consumption.—There were 170 deaths reported from pneumonia during the week ended February 20—a little more than one-fourth (26.1 per cent.) of the total 651 deaths from all causes. Since the first of the month there have been 496 pneumonia and 195 consumption deaths reported, and since the beginning of the pneumonia season, Nov. 1, 1903, there have been 1,831 pneumonia and 863 consumption deaths reported. Out of the total of 8,757 deaths from all causes reported during the period consumption caused 9.8 per cent. and pneumonia 20.9 per cent.

MARYLAND.

No Commemoration Exercises.—The Johns Hopkins University, Baltimore, omitted celebration of Commemoration Day this year owing to the fire. For twenty-seven years it has celebrated February 22 with public exercises and an address.

The Baltimore Fire Losses.—It is now known that sixty-eight warehouses, widely scattered, belonging to the Johns Hopkins Hospital, Baltimore, were destroyed in the fire. The general office of the hospital on Holliday Street having been

destroyed, it is impossible to estimate how much insurance may be recovered. It is said that the income from the burned buildings was devoted to the free work of the hospital, which will suffer along with the clinical facilities. The origin of the fire is still a mystery; the owners and occupants of the Hurst store where it began deny most positively that there was any gasoline in it. The loss of life still remains one. As we go to press a report, as yet unconfirmed, has reached Baltimore that John D. Rockefeller has given $1,500,000 to the Johns Hopkins Hospital to enable the institution to tide over its losses in the fire and to avoid abandonment of its free dispensary work.

MASSACHUSETTS.

Nurses Urge Registration.—The nurses of the state are very earnestly urging the passage of a law to permit their registration similar to the laws already enacted in New York, New Jersey, North Carolina and Virginia.

Personal.—Drs. C. M. Hutchinson, Myron L. King and Arthur Moll are the newly-elected members of the board of medical inspectors for the public schools of Cambridge.——Dr. Fritz Walter Gay has been appointed pathologist to the Malden City Hospital.

Physician Robbed.—On February 3 Dr. William A. Hale, Boston, was lured to a hallway by some colored men on the pretense of a sick friend, beaten and robbed of $200. His assailant has been caught and identified and is held under $2,000 bonds for trial.

Gifts Present and to Come.—By the will of Miss Mary Sophia Walker of Waltham, $5,000 is left to the Waltham Hospital, and to the Boston Lying-in Hospital, Children's Hospital and the Wellesley Convalescent Home $1,000 each. The bulk of the estate, between one and two millions of dollars, is left for the erection of an Episcopal Cathedral, and in the event of the church failing to carry out her requests, the Massachusetts General Hospital is to receive $50,000.

Disease and Death.—During the four weeks ended February 20 there were reported to the board of health in Boston 848 deaths, a decrease of 112 from the same period last year, equivalent to an annual mortality of 18.82 per 1,000. There were 178 cases of diphtheria, with 14 deaths; 130 of scarlet fever, with 5 deaths; 27 of typhoid fever, with 5 deaths; 740 of measles, with 10 deaths, and 152 of tuberculosis, with 100 deaths. Pneumonia was the cause of death in 143 cases; whooping cough in 3, heart disease in 92, bronchitis in 30, and marasmus in 13. The general improvement in health over similar periods in former years, and especially the low number of deaths from pneumonia, 40, 29, 32 and 42 for the weeks noted respectively, may be attributed to the constant covering of the streets with snow, and the success of the street railway company in keeping its surface and elevated cars well heated.

MICHIGAN.

Smallpox.—At the Pittsburg mine, near Bay City, eight cases have been reported.——Mendon has six cases.

Pneumonia Reportable.—Beginning Jan. 1, 1904, health officers have been required to make reports of pneumonia in the same manner as consumption, diphtheria, typhoid fever, scarlet fever, measles, whooping cough, meningitis and smallpox are reported.

Griswold Pardoned.—Dr. Roy W. Griswold, Bay City, sentenced a year ago to two years' imprisonment for causing the death of a woman by a criminal operation, has been pardoned, on the affidavit of the chief of police of Bay City that the operation for which Dr. Griswold was tried and sentenced was performed in Detroit. The prosecuting attorney also favored the pardon.

Prevalence of Disease.—For the month of January, compared with the preceding month, influenza, diarrhea, measles, smallpox and remittent fever were more prevalent, and typhoid fever, whooping cough and meningitis were less prevalent. For the month of January, compared with the average for January in the ten years, 1894-1903, typhoid fever, measles, diphtheria and smallpox were more than usually prevalent, and pneumonia, intermittent fever, erysipelas, inflammation of bowels, remittent fever, dysentery, whooping cough and meningitis were less than usually prevalent.

Communicable Diseases.—Including reports by regular observers and others, meningitis was reported present in Michigan during January, 1904, at 8 places, whooping cough at 22 places, typhoid fever at 93 places, pneumonia at 98 places, diphtheria at 101 places, measles at 102 places, smallpox at 122 places, scarlet fever at 195 places, and consumption at 195 places. Reports from all sources show meningitis reported present at 1 place less; whooping cough at 3 places more; typhoid fever at 24 places less; diphtheria at 1 place more; measles at 40 places more; smallpox at 32 places more; scarlet fever at 23 places more; and consumption at 6 places less, in January, 1904, when compared with the preceding month.

Mortality During January.—There were 3,126 deaths reported for January, corresponding to a death rate of 14.7 per 1,000 population. The number was 184 larger than that registered for the preceding month, and is also greater than the number for January, 1903. By age there were 490 deaths of infants under 1 year of age, 210 deaths of children aged 1 to 4 years, and 982 deaths of elderly persons over 65 years of age. The age distribution was practically the same as for the preceding month. Important causes of death were as follows: Pulmonary tuberculosis, 176; other forms of tuberculosis, 25; typhoid fever, 57; diphtheria and croup, 83; scarlet fever, 34; measles, 12; whooping cough, 19; pneumonia, 412; influenza, 101; cancer, 134; accidents and violence, 180.

MISSISSIPPI.

Smallpox in Yazoo City.—Five cases of smallpox are reported in Yazoo City. Quarantine has been established.

Prosecute Illegal Practitioners.—Dr. Hyman M. Folkes, Biloxi, member of the State Board of Health, has employed an attorney to prosecute all violators of the medical practice act in the Sixth District. Under this arrangement, Mr. Doty has convicted Dr. John M. Smith of Poplarville of illegal practice. It seems that Dr. Smith, while a resident of Louisiana, had secured a non-resident license from the Mississippi State Board to practice in counties contiguous to the Louisiana parish, of which he was a resident. On this license he undertook to practice in the state of Mississippi, moving from his Louisiana home to Poplarville, Miss., where he has been practicing for the past five years on this license. He appealed the case, but precedent shows that he has no chance of winning his contention in this state.

State Board of Health Named and Confirmed.—The governor has appointed the following as a state board of health for a term of four years: Drs. Walton S. Green, Aberdeen; W. H. Harrison, Tutwiler; Jefferson D. Smythe, Greenville; Benjamin F. Ward, Winona; G. H. McNeil, Newton; Jefferson D. Donald, Hattiesburg; Ernest P. Jones, Hermanville, and John H. Rhodes, Jackson. He also confirmed the following nominations for the state at large made by the Mississippi State Medical Association: Drs. J. Augustus Crisler, Yazoo City; William M. Paine, Aberdeen; John R. Tackett, Meridian; Peter W. Rowland, Oxford, and John F. Hunter, Jackson.——At the meeting of the board for organization at Jackson, February 16, the following officers were elected: President, Dr. Benjamin F. Ward; secretary and chairman of the executive committee, Dr. John F. Hunter, and executive committee, Drs. Walton S. Greene and John R. Tackett.

MISSOURI.

Physician Against Physician.—In the suit of Dr. M. Pinckney Morrell, St. Louis, against Dr. Joseph J. Lawrence of the same city for $16,000 for services rendered the son of the latter, the jury gave a verdict of $12,666 for the plaintiff.

Smallpox Rages.—An epidemic of smallpox is said to have been raging in Greenbrier and vicinity since June, 1903. In all about 150 cases have occurred, and the type of the disease is progressively becoming more severe. Three deaths have occurred thus far.

Anti-Spitting Ordinance Recommended.—Butler County Medical Society, at its January meeting, unanimously endorsed resolutions recommending the enactment and enforcement of an ordinance making it a punishable offence for anyone to expectorate on the sidewalks of Poplar Bluff.

Will Reorganize Medical Department.—Major Daniel Morton, surgeon, N. G., M., has been appointed acting chief surgeon of the National Guard of the state. His first duty will be the reorganization of the medical department and hospital corps of the state to accord with the provisions of the Dick bill.

Pneumonia Leads.—During January 272 deaths occurred from pneumonia, in St. Louis; in January, 1903, only 118 deaths from this cause were reported. The deaths for the week ended February 6 numbered 219, of which 42 were due to pneumonia, and 19 to consumption. For the week ended February 20, pneumonia still leads with 36 out of 214 deaths, consumption following with 26 deaths.

Personal.—Dr. Robert H. Goodier, Hannibal, has been appointed a member of the State Board of Health, vice Dr. Ben-

jamin G. Dysart, deceased.——Dr. Jacob S. Triplett, Harrisonville, has been appointed secretary of the Cass County Board of Health.——Dr. Henry S. Atkins has succeeded the late Dr. Edward C. Runge as superintendent of the St. Louis Insane Asylum.——Dr. Jules M. Brady has returned to St. Louis after a year in Vienna.——Dr. John H. Simon, health commissioner of St. Louis, is seriously ill with pneumonia.

NEBRASKA.

Smallpox at State University.—Smallpox has appeared in Lincoln, and has caused the closure of one of the fraternity houses.

Hospital Fair a Success.—The fair recently held in Kearney for the benefit of the new hospital yielded net proceeds exceeding $2,000.

Omaha's Health.—During 1903 Omaha had no epidemic of any kind. The deaths numbered 967, a mortality rate of 9.38 per 1,000.

Physician Wins Suit.—Dr. Joseph H. Thompson, Albion, secured a verdict in his favor in the damage suit for $5,000, brought against him by James Brown for alleged malpractice.

Personal.—Dr. George E. Spear, Lincoln, has the honor of being the first resident physician of St. Elizabeth's Hospital in that city.——Dr. Owen B. Canfield, Edgar, is seriously ill with spinal disease.

Must Report and Pay Postage.—The attorney general has handed down the opinion that physicians must report to the State Board of Health all cases of contagious disease, including smallpox, cholera and yellow fever, and further, that they must pay postage on such reports.

Saunders County Medical Society.—At the annual meeting held in Wahoo, Dr. Alexander S. Von Mansfelde declined re-election as president. Dr. Joseph P. Percival, Prague, was then elected president; Dr. Frank Fornholm, Wahoo, vice-president; Dr. Mary A. Quiney, Ashland, was re-elected secretary, and Dr. John G. Smith, Wahoo, treasurer, and Dr. William J. Pinkerton, Mead, censor. The organization was organized in January, 1903, with a membership of 10; since then eight have joined, so that at present 18 out of 26 practitioners in the county are members.

NEW YORK.

Personal.—Dr. William E. Ard, for several years surgeon to the Binghamton City Hospital, has removed to New York City and entered into partnership with Dr. J. Gorse Simmons.——Dr. James E. Kelsey, Theresa, has gone to Cuba.

Practical Tests for Candidates.—The five candidates for the position of superintendent of the new state hospital for tuberculosis were each required to examine five patients, tuberculous or pseudo-tuberculous, and discover and report the physical condition of each.

Buffalo.

Children's Hospital.—The eleventh annual report of the Children's Hospital shows that the average daily number of patients has been almost double that of former years. The incubators in use have been so successful that it has been necessary to add four to the original two, and they have been in almost constant use.

January Deaths.—The report of the department of health for January shows an annual death rate of 14.43 per 1,000. The principal causes of death were as follows: Consumption, 46; cerebrospinal meningitis, 3; diphtheria, 10; typhoid fever, 13; debility, 31; cancer, 21; apoplexy, 19; cerebral tumor, 4; meningitis, 20; valvular disease of the heart, 29; bronchitis, 16; pleurisy, 1; pneumonia, 54; appendicitis, 3; nephritis, 24, and violence, 25. The total deaths for January were 457, as compared to 441 deaths in January, 1903.

New York City.

Concert for Hebrew Charities.—A concert was given in the Montauk Theater, Brooklyn, January 31, for the benefit of three Brooklyn Jewish charities. More than $10,000 was realized, of which one-third will be given to the Hebrew Hospital.

Honor Re-elected President.—The Society of German Physicians of Brooklyn at its annual banquet did especial honor to Dr. John H. Droge, president and president-elect of the society, under whose administration the membership of the club has materially increased.

Bellevue Authorities Exonerated.—Coroner Jackson, after hearing the evidence, directed the jury to exonerate the Bellevue Hospital authorities from the charge of brutality in the case of Adolphus Drucker, the English member of parliament who died in the alcoholic ward of the hospital in December last.

Must Not Use Saliva on Transfers.—The board of health of New York City has issued a mandate forbidding street-car conductors to moisten their fingers with saliva in order to separate the transfers before dealing them out to passengers. Fears of disseminating disease germs caused this action of the board.

Conrad Escapes.—Dr. Edward E. Conrad, who was arrested, February 12, at the instance of the New York County Medical Society, on the charge of attempting to perform an illegal operation, has been released. The grand jury, on February 17, dismissed the complaints against him, and against the nurse arrested with him.

Surgical Kits for Fire Trucks.—The first installment of 25 leather cases has been delivered to the hook and ladder companies of the city. The cases were designed by Dr. E. Benjamin Ramsdell, chief surgeon of the fire department, are of heavy black leather, twenty-two inches long, and contain sterilized gauze and cotton, iodoform, emergency medicines, forceps, scissors, tourniquets, trays for disinfectants, needles and splints, and other necessary articles. They will be strapped under the seat of each truck.

To Relieve Non-Pulmonary Tuberculous Children.—At the last meeting of the Association for Improving the Condition of the Poor, $15,000 was appropriated for the maintenance at the seaside of 50 children suffering from non-pulmonary forms of tuberculosis. According to Dr. Biggs of the health department, there are in the New York tenements alone from 3,000 to 4,000 children under 15 years of age suffering from tuberculosis of the bones, joints and lymph glands. Tuberculosis of the lungs affects but a relatively small number of children under 15.

OHIO.

National Guard Medical Examining Board.—The adjutant general has announced the appointment of Major Lovett T. Guerin, Captain Sterling B. Taylor and Captain Cassius M. Shepard, all of Columbus, as a board to examine individuals recommended for commission in the medical department of the National Guard.

Cleveland Water Is Bad.—Dr. Howard, city bacteriologist, who has made tests of the water from the new tunnel, just completed, reports it infected with typhoid bacilli. The tunnel cost in all in the neighborhood of $10,000,000, and extends five miles into Lake Erie. There is said to be over 500 cases of typhoid in Cleveland at present.

Medico-Military Appointments.—Dr. Frank W. Hendley, formerly superintendent of the Cincinnati Hospital, has been appointed major and surgeon, and assigned to the First Infantry.——Dr. Charles Cullen, Cincinnati, has been appointed first lieutenant and assistant surgeon and assigned to the same regiment.——Dr. Franklin B. Entrikin, Findlay, has been commissioned major and surgeon and assigned to the Second Infantry.

Society Elections.—LOGAN COUNTY MEDICAL SOCIETY.—At the annual meeting in December, the following officers were elected: President, Dr. Lester C. Pratt; vice-president, Dr. John S. Deemy; secretary, Dr. Simon Morgenroth; treasurer, Dr. Perry D. Covington, and censors, Drs. Abraham L. Huston, John S. Deemy, and Lester C. Pratt, all of Bellefontaine.

ACADEMY OF MEDICINE OF CLEVELAND.—At the second annual meeting held December 18, the following officers were elected: Dr. George W. Crile, president; Dr. William E. Bruner, vice-president; Dr. Edward Lauder, secretary; Dr. Oscar T. Thomas, treasurer, and Drs. William O. Osborn and Hunter Robb, trustees.

GENERAL.

Home for Blind Lepers.—At the leper settlement in Molokai, Hawaii, there has just been completed a home for blind leper women, the gift of Charles R. Bishop.

Missouri Valley Medical Society.—The spring meeting of this association is to be held in Lincoln, Neb., March 24 and 25. The program announces some excellent papers and practical subjects, and that several clinics are to be held by local physicians.

Smallpox on Battleship "Maine."—The United States battleship *Maine*, on her arrival at Guantanamo, Cuba, February 18, was quarantined because of a number of cases of measles and one case of smallpox on board. The latter has been taken to the hospital on the quay. The auxiliary cruiser *Yankee* had one case of measles on board, which was isolated on a lighter in the bay.

Special Pullmans for Consumptives.—As the result of agitation on this subject, and especially following the recommendations of the United States Public Health and Marine-Hospital Service, it is announced that the Pullman Company will add to its equipment hospital cars to run to California on certain days each week, in which consumptives and other sick persons must travel, ordinary Pullmans being reserved for persons in health.

Yellow Fever Investigation.—The delegation of health officers of Louisiana, Mississippi and Alabama was cordially welcomed in Mexico and had a very successful tour. The officers report unofficially that the sanitary measures (drainage, etc.) which they would recommend in some Mexican cities may be more expensive than the municipalities can afford. One recommendation is a system of inspection by health officials. Their full report will be issued later.

Leprosy Committee.—The committee on leprosy of the Second Annual Conference of State and Territorial Health Officers with the United States Public Health and Marine-Hospital Service has been announced as follows: Dr. Charles B. Cooper, president of the Territorial Board of Health, Honolulu, chairman; Dr. J. F. Smith, secretary of the Superior Board of Health, San Juan, Porto Rico, and Dr. J. C. Nolte, secretary of the Louisiana State Board of Health.

Physicians to Visit Rome.—A number of the physicians of Paris, who are united under the patronage of Saints Luke, Cosmas and Damien, three saints who were also medical men in the olden times, have decided to make a pilgrimage to Rome, April 5-14, 1904, and extend an invitation to physicians throughout the world to accompany them. First class the price is to be about $70; second class, less than $60; and third class less than $50 for the round trip from Paris to Rome and back, including all railroad expenses, hotel expenses at Rome for six days, for carriages, interpreters, guides, fees for museums, tips, etc. Pope Pius X, it has been arranged, will receive the physicians in private audience and will grant them the privilege of a visit to the gardens of the Vatican, which is never allowed to ordinary visitors. The families of physicians are admitted to all the privileges physicians will receive. Application must be made before the end of February and the price of the trip paid before March 10 to M. le Docteur H. Dauchez, secretary general of the Society of St. Luke, 5 rue Bayard, Paris, France.

Examination for Marine-Hospital Surgeons.—The surgeon general of the U. S. Public Health and Marine-Hospital Service announces that there will be an examination at the bureau, 3 B Street, S. E., Washington, D. C., Monday, April 4, 1904, at 10 a. m., of candidates for assistant surgeonships. The candidate must be between 22 and 30 years of age, graduate of a reputable medical college, and must furnish testimonials from responsible persons as to his professional and moral character. In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate. The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery and hygiene. The oral examination includes subjects of preliminary education, history, literature, and natural sciences. The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver. Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur. On appointment the young officers are, as a rule, first assigned to duty at one of the large marine hospitals, as at Boston, New York, New Orleans, Chicago or San Francisco. After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon. Promotion to the grade of surgeon is made according to seniority, and after due examination, as vacancies occur in that grade. Assistant surgeons receive $1,600; passed assistant surgeons, $2,000, and surgeons, $2,500 a year. When quarters are not provided, commutation at the rate of $30, $40 and $50 a month, according to grade, is allowed. All grades above that of assistant surgeon receive longevity pay, 10 per cent. in addition to the regular salary for every five years' service up to 40 per cent. after twenty years' service. The tenure of office is permanent. Officers traveling under orders are allowed actual expenses. For further information, or for invitation to appear before the board of examiners, address the surgeon-general, as above.

CANADA.

Personal.—Dr. Claude W. Freeman has been appointed medical superintendent of the Hamilton City Hospital.

To Improve Marine Hospital at Victoria.—The government has appropriated $3,000 toward the Marine Hospital at Victoria, B. C., for much-needed improvements.

Toronto General Hospital.—This hospital has accommodation for 425 patients daily, but the usual average is between 250 and 300. During the year over 3,300 patients are treated in the wards, and about 16,000 in the outdoor departments. It has the largest number of beds of any hospital in Canada.

Generous Gift to Science.—Lord Strathcona has given $20,000 to Manitoba University for the extension of the science department. This timely gift will enable the university to commence development at once. When the sum given may be exhausted, the disposal of a large portion of lands held by the university will provide a yearly revenue fully adequate for all pressing university purposes.

Toronto University Hospital.—The authorities of the University of Toronto and the medical faculty thereof are considering the possibility of erecting a hospital for all classes of patients near the new medical building, to make better facilities for the medical students. If this is not carried out in the immediate future, it is altogether likely that a small building will be erected for outdoor clinics.

Montreal General Hospital Annual Meeting.—At the eighty-second annual meeting of the corporation and board of governors of the Montreal General Hospital, last week, the medical report showed that the total number of patients which passed through the wards in 1903 was 3,086, against 2,878 in 1902, or an increase of 188. The outdoor patients numbered in 1903 35,984, as against 31,993 in 1902, an increase of 3,991.

Sanitary Barber Shops.—A bill before the Ontario legislature seeks to prohibit and regulate the admission to barber shops of persons suffering from disease, to provide for the regular and efficient cleansing of shops and instruments, to secure the personal cleanliness of the barbers, and sanitary condition of the premises, and to prohibit the employment of any one as a barber while suffering from any infectious, contagious or communicable disease.

War Against Patent Medicines.—The Ontario council of the Royal Templars, at a recent session in Toronto, discussed the amount of alcohol in patent medicines, which, by expert analysis, is shown to be from 14 to 40 per cent. Since several of those with the higher percentages are purchased purely for the liquor in them, it was decided to ask for legislation prohibiting the sale of all such medicines which contain a greater percentage of alcohol than is necessary to preserve them.

Canada to Guard Against Diseased Immigrants.—We have mentioned the alarm of the Canadian government over the number of immigrants allowed to enter Canada each year suffering from trachoma and favus. Last year a small house was rented in Quebec as a temporary hospital in which as many as 220 immigrants suffering from these diseases were huddled at one time. It is proposed to erect a detention hospital in Quebec, to care for such persons until they can be sent out of the country.

Dental Changes in Quebec.—An important meeting of the Dental Association of the Province of Quebec was held last week in Montreal, which, after a rather stormy discussion, endorsed the action of the board of examiners in their recent negotiations with McGill and Laval universities. This means that the present Dental College of the Province of Quebec will be abolished, McGill furnishing the dental course for English-speaking and Laval for French-speaking students. McGill, however, declines to grant the degree of doctor of dental surgery until three years after graduation and then on condition of the applicant writing a technical thesis to be approved by the board. The degree they will grant on graduation is master of dental surgery. Laval will grant the D.D.S. on graduation. The term will be lengthened to nine months and the course of study will remain four years. McGill's course will be a department of the medical faculty.

FOREIGN.

Diphtheria Epidemic in Mexico.—Eleven deaths from diphtheria in one day are reported in Guadalajara, Mexico. The epidemic is severe.

Ziehen Called to Berlin.—The chair of psychiatry left vacant by the death of F. Jolly has been given to Ziehen of Halle, who enters on his duties April 1.

Sanatorium for Physicians in Russia.—A fund is being raised in Russia to construct a sanatorium in the Crimea for physicians needing a trip to a southern climate.

Fire in Scottish Hospital.—A fire, February 12, at Broomhill Home for Incurables, Kirkintilloch, Stirlingshire, Scotland, did damage to building and equipment, but caused no loss of life.

Edinburgh Schools Short of Dissecting Material.—Medical schools in Scotland are said to be short of bodies for dissection, owing to objection on the part of the poor-house officials to allow bodies to be used for dissection.

Arguments of Antivivisectionists.—Among the arguments recently presented by some antivivisectionists at Paris was one to the effect that vivisection is of no use to surgery as "the assumed analogy between the organisms of man and of animals is deceptive and misleading. The proof of this fact is furnished by the Americans. They do not practice vivisection and yet they lead the world in surgery."

Damages Claimed from French Alienists.—In 1901, at Paris, a Countess Clozawska fired a blank cartridge at the carriage in which a member of the French cabinet was passing. She was arrested, but was declared irresponsible by the alienists, Drs. Germain, Legras and Vallon, and taken to the Sainte-Anne Asylum. She has recently been set at liberty and has sued each of the experts for $20,000 damages for stating that she was irresponsible, with the consequent detention in the asylum.

The Russia-Japan War.—The Red Cross Society of Russia is taking hold vigorously of its work in the war. Over five million dollars has been subscribed for its purposes, and many trains loaded with supplies have been sent across the continent. M. Alexanderovsky will be in charge on the field. Hospitals on the Amur will be established, and detachments will accompany the regiments into battle in order to be of immediate service. It is planned to have communication with the base hospitals by means of the river and its tributaries. Hundreds of physicians in Russia are reported to have volunteered for service, and many Jews are in the number. The International Committee of the Red Cross has met and made preliminary arrangements for giving assistance to both Russia and Japan in caring for the wounded. Germany has hospitals at Kiao-Chou and at Yokohama, and has notified both combatants that these are at their service for the care of the wounded.

LONDON LETTER.

London's Deficient Ambulance Service.

The need which exists in the metropolis for an efficient ambulance service has been much discussed of late. The matter has been considered by the Metropolitan Asylums' Board, who are willing to supply the demand if the necessary powers can be obtained from parliament. The question was discussed about 10 years ago, but this is a conservative country, and reforms are slow. Apart from the excellent service of horse ambulances of the Metropolitan Asylums' Board, used only for the conveyance of cases of infectious disease to hospital, the only regular service is that of wheeled ambulances used by the police for the conveyance of cases of accident to hospital. But these are much inferior to horse ambulances with accommodation for a nurse as well as for the patient. Yet in many provincial towns excellent ambulance services under the control of the police are provided. For example, there are at Liverpool six fully equipped horse ambulances, which in 1902 attended to 2,759 calls. The ambulance service attached to American hospitals which can be turned out at a moment's notice by telephone does not exist in London. Many hospitals would no doubt be pleased to provide such ambulances, but want of funds and want of space for horses and carriages are bars. The police of the metropolis have been excellently instructed in first aid to the wounded by the St. John's Ambulance Association. In 1901 the number of street accidents in London was 7,995.

A Convalescent Home for Officers of the Army and Navy.

Osborne House, one of the palaces of the late queen, situated on the Isle of Wight, with the magnificent estate attached to it, has been presented by the king to the nation, to be used as a convalescent home for officers of the army and navy. The need for such a home was much felt after the South African war. There will be thirty-eight rooms for single convalescents and five sets of two rooms, or room and dressing room for married couples. For admission the officers must be recommended by the director general of the medical department of the army or navy. There will be a staff of trained nurses. The furniture has been specially devised so as to be as aseptic as possible. Enamel white paint, which contains no lead, is used throughout. The furniture is enameled inside, outside and underneath, so that the absorbent pores of the wood are closed everywhere, and washable surfaces exist on all sides. No angles are allowed; all is rounded off inside the chests of drawers, wardrobes, etc., as well as outside. Around the house are beautiful terraces, a grand stretch of park and sea, and lawn and shrubberies with trees, which break the force of the winds. The climate is that of the south coast, mild and salubrious. For those who can take exercise there is a golf course and twenty-eight miles of good roads for cycling.

The Uses of Radium.

Sir William Ramsay, the distinguished scientist, has delivered a most interesting lecture on radium in which he also dealt with the other radio-active substances, thorium, uranium, polonium, actinium, and an unnamed element discovered by a German professor. Ramsay has found that the gaseous emanation from radium, of which he has collected and measured about the fifth part of a pinhead, is not permanent. It decomposes, and in about a month loses its luminosity. While this is going on the glass tube containing the emanation changes color, in some cases becoming gray and in others purple. The cause of this change is unknown. Radium is constantly decomposing into a luminous gas or emanation, which emanation again decomposes into helium. So far as is known these bodies are elements, and their atom is so heavy that it decomposes. Some investigators hope to accomplish the reverse process, and to build up heavy from light elements. An enormous stride would be made in the knowledge of matter if it were found that elements considered up till now indecomposable and unchangeable are undergoing that universal change which is a fundamental law of nature.

The Vital Statistics of Ireland.

The report on the vital statistics of Ireland, which has just been issued for 1902, is of interest, because it throws light on the social condition of the country. The birth rate has remained practically stationary during the last 20 years; it was 23.5 in 1883 and 23 in 1902. During the same period the English birth rate has declined from 33.5 to 28.5. The lower birth rate of Ireland is explained by the much smaller proportion of women of child-bearing ages in the population—a consequence of emigration. The absence of a fall in the birth rate, which in recent years is so marked, not only in England but in English-speaking countries, is ascribed to the strong religious objections of the Roman Catholics to devices for the prevention of conception. The death rate was 17.5 as compared with 18.2 in an average of the years 1892-1901.

Correspondence.

The Cost of Production of Diphtheria Antitoxin.

DETROIT, MICH., Feb. 17, 1904.

To the Editor:—We have read the editorial, "The Cost of Production of Diphtheria Antitoxin," on page 471 of THE JOURNAL, February 13. It is an interesting article—interesting for what it states, and especially interesting for what it omits to state regarding this responsible, difficult and expensive work. Will you permit us to point out a few of the conspicuous omissions? For example:

Your editorial omits to state what is incontestably true—that the private producers of antitoxin are subject to federal license and to rigid federal supervision, from which the Massachusetts State Board of Health is exempt, since it does not engage in interstate traffic. The representative of the U. S. Public Health and Marine-Hospital Service goes into the biologic laboratories and stables of every private producer in this country and dictates what his equipment shall be. And if the commands of that representative—for commands they are—are not obeyed, the producer's license may be immediately revoked at the pleasure of the bureau.

Your editorial omits to state that the requirements of the bill are so rigid that several of the smaller producers have preferred to abandon the business.

Your editorial omits to state that the private producer must bear the burden of an enormous waste in the form of returned serum. Forty per cent. of his sales comes back for exchange. Every drop of the returned serum is thrown away, as are likewise parts of the expensive injecting device which comes back with the serum.

Your editorial omits to state that each dose of antitoxin sent out by the private producer is accompanied by an in-

jecting device that costs him not less than 25 cents apiece. Taking into account the number of returned packages and the parts of the injecting appliances thus wasted, the actual cost of the device is much greater.

Your editorial omits to state that we are ready and willing to supply the Chicago Board of Health, and every other board of health in the United States, with serum testing 200 units to the c.c., at a price of $0.75 per thousand units, and not at the price of $1.33 which you quote.

Your editorial omits to state that when the physician or the consumer pays $1.33 for a thousand-unit dose of our antitoxin, he receives a serum testing not less than 300 units to the c.c., and that the packages containing the larger doses are filled with the concentrated XX serum—serum which few horses yield, and which is both difficult and expensive to produce.

Your editorial omits to state that it costs the manufacturer something *to obtain and transact* his business. Overlooking that factor, we wonder less at your statement that the current market price "affords a margin larger than would be deemed absolutely necessary to the profitable and successful conduct of ordinary commercial undertakings." But the difference between producing cost and selling price is by no means profit. Gross profits are not net profits. Our net profits rarely rise beyond 10 per cent. Do you imagine that "gross profits" and "net profits" are interchangeable terms? Do you make any allowance for the fact that after the expense is incurred, the business gotten and the sale made, 40 per cent. of the product sold comes back, worthless and wasted, for exchange?

We consider your editorial unfair to a class of men who are bearing an enormous responsibility, and who, if they weakly yielded to the clamor for cheap serum, would be mercilessly condemned at the first catastrophe, such as followed fast on the heels of the "municipal enterprise" displayed by the city of St. Louis in the conduct of its own antitoxin plant. As yet, not a life has been lost by the use of contaminated serum, *save where the antitoxin was made in a municipal laboratory.*

Responsibility considered, the manufacture and sale of antitoxin by no means yields the producer a fair profit. If the profit were at all out of the common or above the average, the law of supply and demand would come into play, and capital, seeking profitable investment, would straightway flow into this particular industry. Just at present capital is flowing out of it.

We hope that, in justice to us, you will publish this letter in an early issue of THE JOURNAL.

PARKE, DAVIS & CO.

Marriages.

OTTO V. GREENE, M.D., to Miss Kate Bascom, both of Bethel, Vt., February 24.

HERMAN J. GIERING, M.D., to Miss Agnes Shutler, both of Baltimore, February 6.

JAMES O. SANDERS, M.D., to Miss Frances Rogers, both of Anderson, S. C., February 10.

CLARENCE MILTON SWALE, M.D., to Miss Lillian Gamidge, both of Mason City, Iowa, February 3.

LEWIS L. NEBLETT, M.D., Stayton, Tenn., to Miss Bessie Carlisle of Sadlersville, Tenn., February 10.

GUY SWAN, M.D., Bellefontaine, Ohio, to Miss Grace Ingalls of Huntsville, at Newport, Ky., February 12.

ROBERT JEMISON HARGROVE, M.D., Tuscaloosa, Ala., to Miss Louise Browne of Hattiesburg, Miss., February 9.

EDWARD WRIGHT RUSSELL, M.D., Clearfield, Pa., to Miss Marion Edgerton Carpenter of Dresden, Germany, February 5.

Deaths.

Frederick Granville Winter, M.D. Long Island College Hospital, Brooklyn, 1882, of Brooklyn, N. Y., formerly president of the Brooklyn Medical Society, a member of the Medical Society of the County of Kings, and surgeon of the Twenty-Third Infantry, N. G., N. Y., died from the effects of a septic wound, after an illness of eight years, at Kingfield, Maine, February 11, aged 46.

Ephraim P. Russell, M.D. Jefferson Medical College, Philadelphia, 1866, of Hopkinsville, Ky., died at the Walker Sanitarium, Evansville, Ind., February 16, one week after amputation of the right leg above the knee, for gangrene of the foot, the local condition being complicated with serious renal disease, aged 61. He was an active member of the Christian County Medical Society.

Emile A. de Schweinitz, M.D. Columbian University, Washington, D. C., 1894, dean of, and professor of chemistry and bacteriology in the Columbian University; director of the biochemic laboratory of the Bureau of Animal Industry, Department of Agriculture, a member of the American Medical Association, died at his home in Washington, D. C., February 15, aged 37.

Frank Le Roy W. Totamore, M.D. Long Island College Hospital, Brooklyn, 1882, acting assistant surgeon, U. S. Army, was drowned with a party of eight officers near Manila, P. I., February 10. He was captain and assistant surgeon of volunteers, and a year ago re-entered the service at Caloocan as a contract surgeon.

James M. Laird, M.D. New York University, 1877, an esteemed practitioner of the Kanawha and New River valleys, W. Va., and a resident of Montgomery for twenty-five years, died at Sheltering Arms Hospital, Paint Creek, while under operation for some disease of the throat, February 15, aged 51.

Joseph R. Askew, M.D. University of Pennsylvania, Philadelphia, 1841, died recently at his home in Jacksonville, Ill. At its meeting, February 11, the Morgan County Medical Society appointed a committee to draft resolutions regarding the death of its deceased member.

Maximilian G. Raefle, M.D. Humboldt Medical College, St. Louis, 1861, a surgeon in the Navy during the Civil War, and some-time deputy coroner of New York City, died suddenly at his home in New York City, February 13, from apoplexy, aged 67.

Sereno Edward Dwight Bumstead, M.D. Harvard University Medical School, Boston, 1844, formerly a physician of Port-au-Prince, died at his home in South Framingham, Mass., February 14, from paralysis, aged 81. He retired from practice in 1901.

Charles Augustus Wheeler, M.D. Worcester (Mass.) Medical College, 1857, of Leominster, Mass., a member of the American Medical Association, a veteran of the Civil War, died at the Massachusetts General Hospital, Boston, February 11, aged 67.

Joshua E. Van Camp, M.D. University of Michigan, Ann Arbor, 1870, a member of the American Medical Association, died very suddenly from apoplexy while making a professional call near his home in Carlisle, Pa., aged 60.

Rodger C. Downey, M.D. University of Vermont, Burlington, 1892, a member of the state and county medical societies, died at his home in Middletown, Conn., February 15, from erysipelas, after a short illness, aged 35.

Charles E. Cook, M.D. Chicago Medical College, 1880, some-time coroner of McHenry County, Ill., died at his home in Huntley, February 18, from double pneumonia, after an illness of ten days, aged 51.

Henry Martin Dearborn, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1869, died at his home in New York City, February 16, from pneumonia, after an illness of eight days, aged 58.

John W. Thompson, M.D. Arkansas University, Little Rock, 1887, of Hillsboro, Ark., was shot and killed, February 12, by a brother of Dr. A. A. Finley, who was killed in March, 1903, by Dr. Thompson.

McDuffie Blanchard, M.D. University of Nashville, 1857, assistant surgeon in the Confederate service, died at his home in Columbus, Ga., February 12, from pneumonia, after a short illness, aged 68.

Charles Elliott Denig, M.D. Starling Medical College, Columbus, 1850, surgeon throughout the Civil War, who retired from practice in 1894, died at his home in Columbus, Ohio, February 9, aged 78.

Frank A. Box, M.D. State University of Iowa, College of Homeopathic Medicine, Iowa City, 1890, of Pulaski, N. Y., died from pneumonia at the Oswego Hospital, February 11, aged 36.

Joseph Beck, M.D. Physio-Medical Institute, Cincinnati, 1878, died at his home in Eldorado, Ohio, February 17, aged 83.

Lawrence Scott Jones, M.D. Eclectic Medical College of Philadelphia, 1881, died at his home in Harrisburg, Pa., from consumption, February 13, after an illness of one year, aged 49.

Henry Augustine Crary, M.D. Albany (N. Y.) Medical College, 1866, died at his home in Knox, N. Y., December 25, from locomotor ataxia, after an illness of several years.

R. E. Curran, M.D. Louisville Medical College, died at his home in Los Angeles, Cal., February 7, from internal hemorrhage, after an illness of two days, aged 59.

Robert Lautenbach, M.D. University of Maryland, a surgeon in the Army during the Civil War, died from pneumonia at his home in Baltimore, February 16, aged 60.

George E. McCosh, M.D. Bellevue Hospital Medical College, New York, 1866, died at his home in St. Louis, February 13, after an illness of three months, aged 62.

George Beecher Malone, M.D. Detroit Medical College, 1885, of Park Ridge, Ill., died at the home of his son in Chicago, February 17, from pneumonia, aged 54.

Conrad G. Eddy, M.D. University College of Medicine, Richmond, Va., 1900, died at his home in St. Marys, W. Va., February 11, from pneumonia, aged 26.

Adna P. Parsons, M.D. Syracuse (N. Y.) Medical College, 1850, died at his home in Forestville, N. Y., February 13, from pulmonary tuberculosis, aged 87.

Henry Buehler Buehler, M.D. Jefferson Medical College, Philadelphia, surgeon during the Civil War, died at his home in Harrisburg, Pa., February 1, aged 69.

Charles W. Trautwein, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1895, died at his home in Kinderhook, Ill., February 22, from acute nephritis.

Edward C. Bain, M.D. University of Tennessee, Nashville, 1865, died at his home in Pleasant Plains, Ill., February 14, after a lingering illness, aged 61.

Stephen W. Ransom, M.D. Chicago Medical College, 1870, a member of the American Medical Association, died recently at his home in Dodge Center, Minn.

Albert Trouchard, M.D. Jefferson Medical College, Philadelphia, 1870, died at his home in Glassboro, N. J., February 11, after a long illness, aged 60.

Martin Ireland, M.D. University of Wooster, Cleveland, 1847, died at his home in Columbia City, Ind., February 11, from paralysis, aged 82.

Levi Vincent, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1872, died at his home in Weston, Ill., February 12, aged 77.

George A. Blakeley, M.D. Rush Medical College, Chicago, 1885, of Albany, Wis., died suddenly in Chicago, February 3, aged 46.

William S. Charlton, M.D. University of Pennsylvania, Philadelphia, 1883, died at his home in Philadelphia, February 2, aged 46.

Samuel Miller, M.D. Toronto School of Medicine, died at his home in St. Louis, February 14, after a prolonged illness, aged 82.

Martin E. Brackett, M.D. University of Buffalo (N. Y.) 1891, died, January 2, at his home in Clarendon, N. Y.

William B. Brown, M.D. New York University, 1846, died at his home in Greenville, N. C., Nov. 12, 1903.

T. J. Tabor, M.D. American Medical College, St. Louis, 1876, died at his home in Doyline, La., December 17.

Simon J. Seyfert, M.D. University of Pennsylvania, 1871, died recently at his home in Pine Grove, Pa.

George Clinton Hale, M.D., of Catskill, N. Y., died at his home in that place, January 30, aged 71.

Miscellany.

Egg Albumin and Castor Oil in Burns.—A mixture of castor oil with the white of an egg allays the pain more quickly and causes the wound to heal more rapidly than any other application. The eggs are broken into a bowl, and the castor oil gradually and slowly poured in while the eggs are beaten. Enough oil is added to make a thick, creamy paste, which is applied to the burn with a feather. The applications are repeated often enough to prevent their becoming dry or sticky. It is best to abstain from any dressings, leaving the surface uncovered.—*Med. Fortnightly.*

Formaldehyd.—It may not be out of place to warn postmortem examiners and, especially, those who act as such only occasionally, with regard to an interesting action of formaldehyd, which is now largely used by embalmers. For some hours after somatic death, the vitality of the intestine and stomach remains to such a degree that various muscular contractions take place. This is frequently seen on the lower animals, and in one human necropsy, six hours after death and after the occurrence of postmortem rigidity of the voluntary muscles, we noted spastic contraction of the small intestine following the touch of instruments. Apparently formaldehyd either causes such spasm or at least fixes the unstriped muscle in its contracted state. At any rate, the stomach and intestines may be found of board-like hardness in places and with narrowing of lumen at the sphincters and in the course of the small intestine, so as to suggest antemortem ileus to the uninitiated.—*Medical Fortnightly.*

The Marine-Hospital Service as a Field for the Physician.—In a recent address before the students of Jefferson Medical College, Philadelphia, speaking of the U. S. Public Health and Marine Hospital Service, Surgeon-General Wyman said: I know of no medical service in the world which holds out the same facilities for the professional advancement for its officers. It has at least 15 expert bacteriologists. It offers opportunity and encouragement for continued study, free from the petty annoyances and interruptions of private practice. It keeps its officers supplied with the latest special books, instruments, and apparatus, beyond the reach of many recent graduates. Aptitude and ambition to excel in any branch of medicine, surgery or preventive medicine have in it their full chance of fruition. Because of the extension of its functions by recent act of Congress, it is necessarily a growing service. The corps is being gradually but constantly enlarged. The service was by act of July 1, 1902, placed on a broad and strong foundation, and has but just begun its development on its higher plane. It has a fine record and a brilliant future—and it is free from politics.

Investigation of Mineral Water.—Nearly two years ago the Academy of Medicine of Paris published the report of a committee appointed to investigate the qualities of Apollinaris water, and the findings were unfavorable. This was noticed in THE JOURNAL, Sept. 6, 1902. There is probably no other natural table mineral water, so-called, so well known as the Apollinaris, and the case excited considerable general interest, especially since legal action was taken by certain parties charging the Apollinaris Company with the offense, under the English law, of selling its bottled water with a false trade description. In order to settle the question, the London *Lancet* sent a special commissioner to the locality of the springs, and his report is published in full in that journal, January 30. It gives an interesting description of the springs and of the method of obtaining and bottling the water. It appears that the carbonic acid which is derived from the water is conducted into a receiver. The water is tanked off, and a slight amount of salt is added, over and above the natural quantity contained, as a precaution against the decomposition of the sulphate of soda contained in the spring. Then the water is passed through a carbonator and the collected gas is forced back under heavy pressure, and it is bottled for consumption. It would appear from this that this commercial article is what it is professed to be, and as evidence of this it is said that water taken directly from the spring does not differ in any respect in taste or quality from that sold. For the reason that we published the unfavorable report, we can in justice only give the other side.

CLIPPINGS FROM LAY EXCHANGES.

SUCCESSFUL DOUBLE NEPHRECTOMY.

"Removed a Child's Kidneys. Unusual Operation Performed. . . . Yesterday Dr. —— performed an unusual operation . . . known as . . . decapulation of the kidneys. . . . Both kidneys were removed, and the child underwent the operation successfully, although there is not much hope of her ultimate recovery."—*Syracuse* (N. Y.) *Herald*, Nov. 29, 1903.

MEDICINE AND MILLINERY.

"Dr. —— has arranged . . . to open an office for the practice of medicine. He will open up a drug store and a millinery store."—*West Plains* (Mo.) *Journal*, Nov. 12, 1903.

WHAT HAD HE AGAINST THE DOCTOR?

Under the headline of *"Things You Want to Know"* the *Norwalk* (Ohio) *Reflector*, Feb. 8, 1904, gives as the leading item: "Dr. ——, a well-known . . . physician, died at Phoenix, Ariz. . . ."

OPENED THE SPICULA.

In a report of an operation for the relief of traumatic epilepsy, the New York correspondent of the *Chicago Tribune* says: "He opened the spicula and a bone . . . was found imbedded in the brain."

DID HIS PATIENTS INVARIABLY DIE?

"Dr. ——, the expert physician . . . is gone and forever at rest from his labors. . . . As a diagnostician he seldom failed. Exceptions are hard to find where postmortems did not prove the correctness of his diagnosis."—*St. Anne* (Ill.) *Record*, Jan. 29, 1904.

SMOOTH OPERATION ON THE KAISER.

A cable dispatch from Berlin to the *Chicago Record-Herald* of November 9, announcing an operation on the throat of Emperor William says: "Professor Schmidt guarantees the statement that the operation went off perfectly smooth, but he emphasizes as a sine qua non that the Kaiser must not talk."

DEATH FROM SPONTANEOUS BIOPLASM.

"Dr. —— has been at —— to investigate the reported death of two children . . . The deaths, Dr. —— says, did not result from vaccination or the virus . . . but from spontaneous bioplasm in the wounds on the arms of the little ones. Dr. —— is convinced that the vaccination was entirely successful. The children are still dead."—*Fort Wayne* (Ind.) *Gazette*, Nov. 16, 1903.

VERTEBRA REMOVED, CLEANED AND REPLACED.

"Remarkable Surgical Operation—Vertebra Removed and Cleaned to Cure Paralysis Following Broken Neck. Sioux City, Iowa, Dec. 21.—An operation having no parallel in the surgical world was performed . . . to-day. A part of the third cervical vertebra was removed, the false growth of tissue was cleaned out and the bone replaced. The patient is doing well. . . . No other case is known in which the cervical vertebra, situated so near the medulla oblongata, has been removed and replaced."—*New York Tribune*, Dec. 22, 1903.

OPERATOR HAD NERVE.

"Dr. —— . . . performed an operation on a . . . woman, which, while it further establishes his reputation as one of the foremost surgeons of the country, stands as one of the most critical and successful ever performed in the history of surgery. The patient . . . came under the knife, with a goitre, a growth in the throat, which subsequent events showed to weigh 8 lbs. and 8 ounces. It had been broken and was in process of disintegration, with her days apparently not numbered beyond a week. It had to be removed. No anesthetic was given, and for 2 hours and 20 minutes the patient was directly under the knife. During the operation the surgeon's touch or scalpel passed by or rested on the common carotid arteries, jugular vein and laryngal nerve. The deviation of the knife a hairbreadth at certain times would have plunged the patient into eternity. When the operation was done not two ounces of blood had been lost and the surgeon retired, completely exhausted, from the table. An indomitable nerve, faultless skill and powerful strength could only have kept him up to the task."—*Shamokin* (Pa.) *Herald*, Nov. 16, 1903.

THE ARMY MEDICAL DEPARTMENT.

The Proposed Modification—New Legislation Now Before Congress.

The following three bills of importance to the medical corps of the Army have been approved by the Secretary of War and forwarded by him for the action of Congress.

ARMY HOSPITAL AND COLLEGE.

A. To appropriate $400,000 for the purchase of land and the construction of an Army general hospital at Washington. The present general hospital there is a small and unsuitable building on the grounds of the Washington Barracks, which likewise occupies space needed for the buildings of the new engineer post there, which is now under construction. It is proposed to make the new hospital a handsome and modern structure, with sufficient space about it for great extension by the erection of temporary wards in time of war. It will be also the home of the Army Medical School, which now occupies cramped and inadequate quarters at the Army Medical Museum. This school is one of the service schools at which officers of the organized militia are by recent Act of Congress authorized to attend courses with the provision that while so doing they "shall receive from the annual appropriations for the support of the Army the same travel allowances and quarters or commutation of quarters to which an officer of the Army would be entitled and also to receive commutation of subsistence at the rate of one dollar per day while in actual attendance." This liberal and important provision for the special instruction of National Guard medical officers will, however, remain inoperative until room for the extension of the school is gained by the construction of the new hospital. Here also will be stationed a company of instruction of the hospital corps and a detachment of the Army nurse corps. The establishment of such a hospital and school was recommended by the Surgeon General as far back as 1862. When carried out it will correspond with the English Army Hospital School established at Netley after the Crimean War, and with the celebrated French Hospital School at Val-de-Grace established more than a hundred years ago. This hospital will have facilities for the treatment of special medical and surgical cases, and will be provided with all kinds of apparatus, which on account of their expense and special character are not supplied to the hospital at Army posts.

THE SURGEON-GENERAL'S LIBRARY BOOK CASES.

B. For the purchase of book stacks for the library of the Surgeon-General's office, $13,000. An appropriation for this purpose has been unsuccessfully asked for for the past six years, and the books of this fine national institution are piled on window sills and on the floor in consequence of the failure of Congress to provide for it.

REORGANIZATION OF THE MEDICAL CORPS.

C. The third and most important measure is for the reorganization of the medical corps with a view to the attainment of the following objects:

1. To increase the number of medical officers sufficiently for them to be able to perform in time of peace all the duties with which they are charged by Army regulations. So far is this from being the case at present that the regular medical corps has to be supplemented by the employment of about two hundred contract surgeons.

2. To correct the injustice done the medical corps by the act for the reorganization of the Army in 1901, by which without a proper consideration for the needs of the medical department the proportion of officers in the higher grades was greatly reduced, and the prospect for promotion in that branch of the service much impaired. As a result the medical department has been unable to fill the vacancies in the grade of lieutenant created by that act, in spite of every effort to attract candidates, and there have been eleven resignations from among the younger men in the corps as compared with one in the same period of time antecedent to that act. In this bill the Surgeon General asks for a proportionate number in each grade corresponding to that given by Congress to the Medical Department of the Navy last year, which gives a rate of promotion corresponding quite closely with that enjoyed by the Medical Department of the Army prior to the Act of Feb. 2, 1901.

3. To modify the existing law as to examination for promotion so as to provide examination before promotion to all grades except the surgeon generalcy.

4. To establish a reserve medical corps into which the contract surgeons now in the service will be commissioned. These

reserve officers will have, while in active service, the rank and allowances of first lieutenants, medical corps, which will give them a more dignified and satisfactory status than that now enjoyed by contract surgeons. It is the desire of the medical department to attract into this reserve corps capable young men who have recently graduated from the best medical colleges, and to give them military experience and, so far as practicable, a course of instruction at the Army Medical School, so that when they return to civil life to establish themselves and build up a practice they will constitute an eligible list of trained medical officers available for service in time of war. These reserve officers will not be ordered to active service except on their own application and will be eligible for appointment to positions in the medical service of the organized militia and as United States volunteer officers with higher rank.

The bill is as follows:

A BILL TO INCREASE THE EFFICIENCY OF THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY.

(As approved by the Secretary of War, Feb. 18, 1904.)

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED, That from and after the approval of this act the Medical Department of the United States Army shall consist of one Surgeon General, with the rank of Brigadier General; a medical corps and a medical reserve corps, as hereinafter provided; and the hospital corps, the nurse corps and dental surgeons as now authorized by law.

SEC. 2. That the medical corps shall consist of 16 colonels, 24 lieutenant colonels, 110 majors and 200 captains or first lieutenants, who shall have rank, pay and allowances of officers of corresponding grades in the cavalry arm of the service. Immediately following the approval of this act all officers of the Army now commissioned in the corresponding grades in the medical corps established by this act, in the order of their seniority and without loss of relative rank in the Army, as follows: Assistant surgeons general, with the rank of colonel, as colonels; assistant surgeons general, with the rank of lieutenant colonel, as lieutenant colonels; surgeons with the rank of major, as majors; assistant surgeons who had attained the rank of captain on or before Dec. 25, 1903, as captains; assistant surgeons, with the rank of first lieutenant, who at the time of the approval of this act shall have served less than three years as such in the Regular Army, as first lieutenants:

Provided, That assistant surgeons who at the time of the approval of this act shall have served three years or more in the Regular Army as such, and who had not attained the rank of captain on or before Dec. 25, 1903, shall, subject to examination, be recommissioned in the medical corps in the order of their seniority, as captains, to rank as such from the date of the approval of this act.

Provided further, That any assistant surgeon with rank of first lieutenant who has heretofore failed to qualify for promotion to the rank of captain and is now under suspension shall be recommissioned in the medical corps as first lieutenant with rank as such from date of his commission as assistant surgeon, and shall, at the end of his period of suspension, be again examined in accordance with law, and if found qualified shall be recommissioned in the medical corps as captain with the rank to which he would have been entitled under the terms of this section had he not been under suspension; if he fails to pass such examination he shall be honorably discharged from the service with one year's pay, as provided in Section 5 of this act.

SEC. 3. That promotions in the medical corps to fill vacancies in the several grades created or caused by this act, or hereafter occurring, shall be made according to seniority, but all such promotions and all appointments to the grade of first lieutenant in said corps shall be subject to examination as hereinafter provided;

Provided, That the increase in grades of colonel, lieutenant colonel and major, provided for in this act, shall be filled by promotion each calendar year of not exceeding two lieutenant colonels to be colonels; three majors to be lieutenant colonels; fourteen captains to be majors; and of the increase in the grade of first lieutenant not more than 25 per centum of the total of such increase shall be appointed in any one calendar year:

Provided further, That a first lieutenant of the medical corps on the completion of three years' service, including service as assistant surgeon in the Regular Army, or as surgeon or assistant surgeon in the Volunteer Army during the war with Spain and since, on active duty as first lieutenant in the medical reserve corps as hereinafter provided, shall be entitled to the pay and allowances of a captain of the medical corps, and when the aggregate of his service, either as first lieutenant in the medical corps or as assistant surgeon in the Regular Army, equals three years he shall be entitled, subject to examination, to promotion to the grade of captain in the medical corps.

SEC. 4. That no person shall receive an appointment as first lieutenant in the medical corps until he shall have successfully passed an examination, under regulations to be prescribed by the Secretary of War, before an army medical board consisting of not less than three officers of the medical corps, to be designated by the Secretary of War.

SEC. 5. That no officer of the medical corps shall be promoted therein until he shall have successfully passed an examination before an army medical board consisting of not less than three officers of the medical corps to be designated by the Secretary of War, such examination to be prescribed by the Secretary of War, and to be held at such time anterior to the accruing of the right to promotion as may be for the best interests of the service:

Provided, That should any officer of the medical corps fail in his physical examination and be found incapacitated for service by reason of physical disability contracted in the line of duty, he shall be retired with the rank to which his seniority entitled him to be promoted, but if he should be found disqualified for promotion for any other reason, a second examination shall not be allowed, but the Secretary of War shall appoint a board of review, to consist of three medical officers superior in rank to the officer examined, none of whom shall have served as a member of the board which examined him. If the unfavorable finding of the examining board is approved by the board of review the officer reported disqualified for promotion shall, if a first lieutenant or captain, be honorably discharged from the service with one year's pay, and, if a major or lieutenant colonel, shall be debarred from promotion, and the officer next in rank found qualified shall be promoted to the vacancy. If the action of the examining board is disapproved by the board of review the officer shall be considered qualified and shall be promoted.

SEC. 6. That nothing in this act shall be construed to legislate out of the service any officer now in the Medical Department of the Army, nor to affect the relative rank for promotion of any medical officer now in the service, or who may hereafter be appointed therein, as determined by the date of his appointment or commission.

SEC. 7. That for the purpose of securing a reserve corps of medical officers available for military service, the President of the United States is authorized to issue commissions as first lieutenants therein to such graduates of reputable schools of medicine, citizens of the United States, as shall from time to time, on examination to be prescribed by the Secretary of War, be physically, mentally and morally qualified to hold such commissions, the person so commissioned to constitute and be known as the medical reserve corps. The commissions so given shall confer on the holders all the authority, rights and privileges of commissioned officers of the like grade in the medical corps of the United States Army, except promotion, but only when called into active duty as hereinafter provided and during the period of such active duty. Officers of the medical reserve corps shall have rank in said corps according to date of their commissions therein, and when employed on active duty as hereinafter provided shall rank next below all other officers of like grade in the United States Army:

Provided, That contract surgeons now in the military service, who receive the favorable recommendation of the Surgeon General of the Army, shall be eligible for appointment in said reserve corps without further examination.

SEC. 8. That in emergencies the Secretary of War may order officers of the medical reserve corps to active duty in the service of the United States in such numbers as the public interests may require and may continue such officers on such duty so long as their services are necessary:

Provided, That nothing in this act shall be construed as authorizing an officer of the medical reserve corps to be ordered on active duty as herein provided who is unwilling to accept such service, nor to prohibit an officer of the medical reserve corps not designated for active duty from service with the militia, or with the volunteer troops of the United States, or in the service of the United States in any other capacity; but when so serving with the militia or with volunteer troops, or when employed in the service of the United States in any other capacity, an officer of the medical reserve corps shall not be subject to call for duty under the terms of this section:

Provided further, That the President is authorized to honorably discharge from the medical reserve corps any officer thereof whose services are not longer required:

Provided further, That officers of the medical reserve corps who apply for appointment in the medical corps of the Army may, on the recommendation of the Surgeon General, be placed on active duty by the Secretary of War and ordered to the Army Medical School for instruction and further examination to determine their fitness for commission in the medical corps.

SEC. 9. That officers of the medical reserve corps when called on active duty in the service of the United States as provided in Section 8 of this act shall be subject to the laws, regulations and orders for the government of the Regular Army, and during the period of such service shall be entitled to the pay and allowances of first lieutenants of the medical corps with increase for length of service now allowed by law, said increase to be computed only for time of active duty:

Provided, That no officer of the medical reserve corps shall be entitled to retirement or retirement pay; nor shall he be entitled to pension except for physical disability incurred while in active duty and in line of duty.

SEC. 10. All acts and parts of acts in conflict with the provisions of this act are hereby repealed.

This bill, as is now the case with all Army legislation, was considered by the general staff, a body in which the medical corps alone of all the great staff departments, has no representation. It was, however, approved in all respects by that body, except that the general staff recommended a reduction in the number in the grades of colonel and lieutenant colonel. In these two grades they were far less liberal to the medical corps than to the engineer corps, for the increase in which they considered a bill at the same time.

Secretary Root was not convinced of the wisdom and justice of this reduction, and one of his last official acts was to refer back the bill to the general staff for reconsideration of this point, with the following endorsement:

WAR DEPARTMENT, WASHINGTON, Jan. 30, 1904.

I heartily approve this bill in principle. I consider that it will be greatly to the benefit of the service to abandon the employment of contract surgeons and substitute in their place regular commissioned officers. I do not think the number to which it is proposed to increase the medical corps is at all excessive. It seems to me that the presentation of the case by the Surgeon General in

regard to the necessities of skilled administration of the medical service in time of war is conclusive. It will be easy in time of war to secure an adequate number of physicians competent to treat the sick and wounded, but it will be impossible to secure medical men competent to conduct the administration of the great and complicated medical service unless they are specially trained in time of peace. The lack of sufficient number of such trained officers in the past has caused untold suffering and the sacrifice of many thousands of valuable lives. It is our present duty to see to it that such a condition shall never exist again. I believe that that can be accomplished only by following the course which has now been indicated by the Surgeon General, and approved by the general staff.

On the single question of the relative proportion of majors, lieutenant colonels and colonels which should properly be accorded to the medical corps the Surgeon General wishes to ask reconsideration by the general staff. That single question, with the assent of the chief of staff, will accordingly be relegated to the general staff for further consideration. On all other questions I approve the bill in detail. (Signed) ELIHU ROOT, Secretary of War.

A compromise between the view of the general staff and that of the Surgeon General has been approved by Secretary Taft, which allows the full number asked for by the medical department in these grades, but by reducing the number of colonels and increasing the number of lieutenant colonels makes a proportion corresponding to the other staff corps in the Army rather than to the Medical Department of the Navy. This is acceptable to the Surgeon General. This bill, if adopted unchanged by Congress, will immensely increase the efficiency of the medical corps, and by means of the reserve corps its methodical expansion for war. It also, by substituting for the anomalous and little respected status of the contract surgeon medical officers of positive military rank, secures to the representatives of our profession in the Army a dignified and satisfactory position in the military body.

It is hoped that every reader of THE JOURNAL will interest himself in these important measures to the extent of indicating to his representatives in Congress his approval of them.

SECRETARY TAFT'S APPROVAL.

The following letter from the new Secretary of War bears on the above:

WASHINGTON, Feb. 18, 1904.

To the Chairman, Committee on Military Affairs, House of Representatives:—I have the honor to transmit herewith a bill to increase the efficiency of the Medical Department of the U. S. Army, together with the approval by my predecessor, Secretary Root, of the bill in every part except as to the relative proportions of majors, lieutenant colonels and colonels which should properly be accorded to the medical corps.

The question was remitted to the general staff for further consideration, and has been returned with the recommendation that the number of colonels be limited to 12, the lieutenant colonels to 18, with 110 majors and 300 captains and first lieutenants; whereas the recommendation of the Surgeon General is that the colonels number 20, the lieutenant colonels 20, majors 110 and captains and lieutenants 300. It appears that the division of the general staff to which the bill was referred approved the proportion of colonels and lieutenant colonels as recommended by the Surgeon General, but that the War Department general staff as a body, when the exact point was submitted to them, made the recommendation as above. General Chaffee was not present, I am informed, at the meeting of the general staff, and possibly did not have the advantage of all the statements which were made with reference to the proper number of medical officers for each tactical unit in the field. Certainly the evidence introduced by the Surgeon General shows that the number necessary for each tactical unit is considerably greater than that which must have been given the General Chaffee in the conclusion which he reached. Of course, I must differ from the opinion of the general staff and the distinguished chief of that body with great diffidence in view of the short time that I have been in the department. I have, however, read the arguments briefly of the Surgeon General, and the statement of the third division of the general staff, and also of the chief of staff, and I am bound to say that it seems to me that the arguments of the Surgeon General substantially outweigh those advanced by the chief of staff. The Surgeon General's report shows a complete workable system which the amendment by the general staff truncates and destroys the symmetry of. Then, too, the prospect of promotion which the increased number in the higher grades offers to those who enter the service seems to be absolutely essential to procuring good material for the medical corps. The increased expense in securing a proper medical education in modern days, as shown by lengthening of the term of preparation from two years to four years, and the great professional rewards in civil life make it highly important that there be offered a due prospect of promotion to young men of ability to induce them to enter the corps.

In deference to the opinion of the general staff, however, I have concluded to recommend a reduction in the number of colonels and an increase in the number of lieutenant colonels, so that the bill should provide for 16 colonels and 24 lieutenant colonels, and this I do after a conference with the Surgeon General, who is willing to accept the amendment.

I do not approve that amendment to the law which limits the examination of a lieutenant colonel, necessary to his promotion to a colonelcy, to an examination of his physical condition, his moral character and his past record in the service, and it seems to me that the examinations ought to be continued to the highest rank, except that of the Surgeon General, which grade is filled, of course, only by selection. Such a requirement will have the effect of preventing the upper grades from being regarded as places of leisure and as not entailing the hard, enthusiastic work which is found in the lower ranks.

I have the honor to recommend the passage of the bill amended as suggested. I believe it to be of the utmost importance in securing a proper and efficient medical corps.

I accompany this letter with the bill and with the communications received by me from the Surgeon General, the third division of the general staff and the chief of staff.

(Signed) WM. H. TAFT, Secretary of War.

State Boards of Registration.

COMING EXAMINATIONS.

Regent of the State Board of Medical Examiners of New Hampshire, State House, Concord, March 1-2. Regent, Channing Folsom, M.D., Concord.

Board of Registration in Medicine for Massachusetts, State House, Boston, March 8-9. Secretary, Edwin B. Harvey, M.D., State House, Boston.

Committees of Examination of Connecticut, New Haven, Hartford and Waterbury, March 8. Secretary, Prof. C. A. Lindsly, New Haven.

Maine Board of Registration of Medicine, Portland, March 23. Secretary, A. K. P. Meserve, M.D., Portland.

Regular Board of Medical Examiners for Georgia, Athens, March 30. Secretary, I. H. Goss, M.D., Athens.

Correction in Iowa Report.—Dr. J. F. Kennedy, Des Moines, secretary of the Iowa State Board of Medical Examiners, writes that he accredited one candidate who failed in the October examination to Omaha Medical College who was a graduate of Creighton Medical College. The report of this examination was given in THE JOURNAL, Jan. 23, 1904, p. 258.

Association News.

Laryngology Guest at Atlantic City.

Dr. A. Logan Turner, F.R.C.S. Edinburgh, surgeon for diseases of the ear and throat, Deaconess Hospital, Edinburgh, is to be the guest of honor of the Section on Laryngology and Otology of the American Medical Association, and will read a paper at Atlantic City. Dr. Turner's writings are on a variety of laryngologic and rhinologic topics. His work on the accessory sinuses of the nose is regarded as a classic work of reference on that subject, and his article on "The Demonstration of Artificial Edema of the Larynx" is of the same high standard. The Section is fortunate in having secured the attendance of Dr. Turner.

The Public Service.

Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, for the week ending Feb. 20, 1904:

Dean, Elmer A., asst.-surgeon, granted ten days' leave of absence.

Purviance, Wm. E., asst.-surgeon, returned to duty at Chicago from leave, Feb. 16, 1904, reports in temporary charge of C. S. O., Department of the Lakes, Chicago, on account of sickness of Col. Philip F. Harvey, chief surgeon.

Clarke, George R., contract surgeon, relieved from duty in the Philippine Division and assigned to duty at Columbus Barracks, Ohio, where he reported February 17.

Voohies, Hugh G., contract dental surgeon, relieved from further duty at San Juan, P. R., and assigned to station at Fort Hancock, N. J. (now on temporary duty at Plattsburg Barracks, N. Y.).

Navy Changes.

Changes in the medical corps, U. S. Navy, for week ending Feb. 20, 1904:

McClanahan, R. K., asst.-surgeon, ordered to the Naval Hospital, New York, N. Y., for treatment.

Nelson, J. L., asst.-surgeon, detached from the naval station, Carvite, P. I., and ordered to the naval station, Guam, L. I.

Williams, R. B., P. A. surgeon, commissioned P. A. surgeon with rank of lieutenant, from Nov. 17, 1903.

Butler, C. St. J., asst.-surgeon, ordered to the *Constellation*, with additional duty at the naval training station, Newport, R. I.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Feb. 18, 1904:

Stoner, J. B., surgeon, to proceed to Cape Charles Quarantine Station and assume temporary charge.

Kora, W. A., asst.-surgeon, granted eighteen days' leave of absence from February 19.

Warren, R. S., asst.-surgeon, bureau letter granting leave of absence for seven days from February 12, amended to read seven days from February 15.

Hanrath, F. R., pharmacist, on being relieved by Pharmacist R. Rogers, to proceed to St. Louis and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist M. Walerius.

Woods, C. H., pharmacist, relieved from duty at Chicago and directed to proceed to Cincinnati and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist R. Rogers.

Walerius, M., pharmacist, on being relieved by Pharmacist F. R. Hanrath, to proceed to Chicago and report to medical officer in command for duty and assignment to quarters.

Rogers, R., pharmacist, on being relieved by Pharmacist C. H. Woods, to proceed to Cleveland, Ohio, and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist F. R. Hanrath.

Herty, F. J., pharmacist, on being relieved by Pharmacist B. R. Holsendorf, to proceed to Boston and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist L. C. Spangler.

Slough, C., pharmacist, relieved from duty at San Francisco Quarantine and directed to proceed to San Francisco and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist M. E. Mason.

Holsendorf, B. R., pharmacist, relieved from duty at Havana, Cuba, and directed to proceed to San Juan, P. R., and report to medical officer in command for duty and assignment to quarters, relieving Pharmacist F. J. Herty.

Mason, M. E., pharmacist, on being relieved by Pharmacist C. Slough, to proceed to San Francisco Quarantine and report to medical officer in command for duty and assignment to quarters.

Southard, P. A., pharmacist, granted leave of absence for one day on account of sickness.

Spangler, L. C., pharmacist, on being relieved by Pharmacist F. J. Herty, to proceed to Tampa Bay Quarantine and report to medical officer in command for duty and assignment to quarters.

Stier, C., pharmacist, relieved from duty at Tampa Bay Quarantine and assigned to duty at Key West, Fla.

Sherman, C. H., pharmacist, granted leave of absence for twelve days from February 8.

BOARD CONVENED.

Board to meet at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as assistant surgeon. Detail for the board: Surgeon D. A. Carmichael, chairman; Surgeon G. M. Guiteras; P. A. Surgeon J. F. Anderson, recorder.

Health Reports.

The following cases of smallpox, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital service, during the week ended Feb. 19, 1904:

SMALLPOX—UNITED STATES.

California: San Francisco, Jan. 31-Feb. 7, 4 cases.
District of Columbia: Washington, Feb. 6-13, 5 cases.
Florida: Jacksonville, Feb. 6-13, 2 cases.
Illinois: Cairo, Jan. 1-31, 13 cases; Danville, Feb. 6-13, 1 case.
Louisiana: New Orleans, Feb. 6-13, 4 cases, 1 case imported.
Michigan: Detroit, Dec. 6-13, 4 cases; at 63 places, Jan. 30-Feb. 6, present.
Missouri: St. Louis, Jan. 30-Feb. 6, 20 cases.
New Hampshire: Manchester, Feb. 6-13, 8 cases.
New Jersey, Feb. 6-13, Camden, 1 case; Trenton, 3 cases.
New York: Elmira, Feb. 6-13, 1 case imported from Cohockton.
Ohio: Cincinnati, Feb. 5-12, 9 cases; Feb. 6-13, Dayton, 18 cases; Warren, 1 case.
Pennsylvania: Feb. 6-13, Allentown, 5 cases; Butler, 1 case; Johnstown, 1 case, 1 death; Philadelphia, 58 cases, 10 deaths; Pittsburg, 10 cases, 2 deaths.
South Carolina: Charleston, Jan. 30-Feb. 13, 16 cases, 1 death.
Tennessee: Feb. 6-13, Memphis, 42 cases; Nashville, 8 cases.
Washington: Tacoma, Feb. 1-8, 1 case.
Wisconsin: Milwaukee, Feb. 6-13, 6 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Jan. 16-23, 7 cases.
Belgium: Antwerp, Jan. 10-17, 3 cases, 1 death.
Brazil: Pernambuco, Dec. 16-31, 28 deaths; Rio de Janeiro, Jan. 10-17, 39 cases, 26 deaths.
Canada: Vancouver, Jan. 1-31, 7 cases.
China: Hongkong, Dec. 26-Jan. 2, 1 case.
France: Paris, Jan. 23-30, 34 cases, 3 deaths.
Great Britain: Jan. 22-30, Edinburgh, 9 cases; Leeds, 1 case; Glasgow, Jan. 29-Feb. 5, 46 cases; Jan. 16-23, Leith, 1 case; South Shields, 2 cases; Jan. 23-30, Manchester, 1 case, 1 death; Sunderland, 1 case; Nottingham, Jan. 16-30, 23 cases.
India: Bombay, Jan. 12-19, 1 death; Karachi, Jan. 10-17, 3 cases.
Italy: Palermo, Jan. 9-16, 1 case.
Malta: Jan. 9-16, 2 cases.
Mexico: City of Mexico, Jan. 10-31, 9 cases, 3 deaths.
Netherlands, Amsterdam, Jan. 16-30, 9 cases, 1 death.
Russia: Moscow, Jan. 9-16, 4 cases, 1 death; St. Petersburg, Jan. 16-23, 4 cases, 4 deaths; Warsaw, Jan. 8-16, 10 deaths.
Siberia: Vladivostock, Jan. 11, epidemic.
Spain: Barcelona, Jan. 31, 16 deaths; Madrid, Jan. 20, epidemic; Santander, Jan. 25-Feb. 1, 8 cases, 1 death.
Turkey: Constantinople, Jan. 17-31, 9 deaths.

CHOLERA—FOREIGN.

Turkey in Asia: Syria and Mesopotamia, Jan. 11, 11 cases, 4 deaths.

PLAGUE—UNITED STATES.

California: San Francisco, Feb. 7, 1 case.

PLAGUE—FOREIGN.

Brazil: Pernambuco, Dec. 16-31, 3 deaths.
Egypt: Alexandria, Jan. 21, 1 case.
India: Bombay, Jan. 12-19, 189 deaths; Karachi, Jan. 10-17, 8 cases, 9 deaths; Madras, Jan. 9-16, 1 death.
Russia: Cronstadt, Jan. 20, 1 death, laboratory infection.
South Africa: Cape Colony, Jan. 2-9, 1 case, 1 death.

Medical Organization.

Kansas.

CLAY COUNTY MEDICAL SOCIETY.—On February 11, the physicians of the county met at Clay Center, and organized a county society on the standard plan, with the following officers: President, Dr. Samuel E. Reynolds, Clay Center; vice-president, Dr. Benjamin F. Morgan, Clay Center, and secretary and treasurer, Dr. Andrew Pearson, Wakefield.

Mississippi.

LINCOLN COUNTY MEDICAL SOCIETY.—Dr. Oliver B. Quin, McComb, councilor for the Ninth District, met the physicians of the county at Brookhaven, February 9, and organized a society on the standard plan, with the following officers: Dr. James W. Bennett, president; Dr. John T. Butler, vice-president, and Dr. Solon G. Wilson, secretary and treasurer, all of Brookhaven.

Montana.

MISSOULA COUNTY MEDICAL SOCIETY.—This society was organized at Missoula, December 26, on the standard plan, with 10 charter members and the following officers: President, Dr. George T. McCullough; vice-president, Dr. Joseph A. Tremblay; secretary-treasurer, Dr. Russell Gwinn; delegate, Dr. W. Buchanan Parsons, and censors, Drs. John J. Buckley, Charles Pixley, and John T. Brown, all of Missoula.

New Jersey.

SALEM COUNTY MEDICAL SOCIETY.—At the quarterly meeting held at Woodbridge, February 3, the society adopted the standard plan of reorganization.

Society Proceedings.

PHYSICIANS' CLUB OF CHICAGO.

Monthly Meeting, held Feb. 16, 1904.

MR. CLARENCE DARROW, a noted lawyer, defined graft as "the effort of any human being to take from society or from another human being or animal more than he really gives to society in return." Great grafts are done inside the law. The wise grafter never undertakes to get something contrary to the law. He undertakes to fix the law so that he can get something according to the law. It is more profitable and safer. The cheap grafter, who does not understand his business, and does things by retail instead of wholesale, who has little voice in making or administering laws, undertakes to graft contrary to the law. Great capitalists graft inside the law. It is easier for them to choose their agents and their tools to fix the law the way they want it, and they get what they want without running the slightest possible risk. The grafter is a product of his environment. There is considerable grafting in the legal profession. Indirectly, that is what the legal profession is for, said Mr. Darrow. It is a business chosen by certain men because they think by pursuing it they can get more than they can by pursuing any other business they are familiar with. He said it speaks well for the medical profession that there are few physicians in Congress or in legislatures.

DR. HAROLD N. MOYER discussed medical graft. He said he had made inquiries from a large number of members of the profession, and has been unable to find anybody who knew anybody who grafted, or knew anything about graft in the medical profession. He has found one or two men who said they knew of somebody else in the profession grafting, but on running the inquiry down, he found it was false, and he received the word of the man himself to authenticate it.

DR. J. CLARENCE WEBSTER asked about the Chicago surgeons in high places who contrive with country practitioners to send them patients. Such men existed, and one could put his fingers on them. It is not necessity that stimulates these men to carry out this nefarious practice, which is not only detrimental to their self-respect, but a temptation to weak brothers with whom they come in contact. Within the last

month he saw a circular signed by a surgeon who is connected with one of the well-known hospitals of Chicago. This circular was sent around to various physicians in Illinois and neighboring states, offering bribes for patients sent to him. He knows of the same thing having been done by a professor in one of the best medical schools in a neighboring state. These men are not starving. They do not require to do that business, but they do it. What is the explanation? Not necessity, but deviltry—degeneration, and as long as men in high places do this, he said it is absolute folly to expect the struggling practitioners, who are in the position of being bribed, not to be bribed.

DR. PALMER FINDLEY said the burden of medical graft falls on the young physician and surgeon. He does not think any surgeon has to graft for bread and butter. Going out into a neighboring town two or three months ago to operate on a poor farmer's wife for a small fee, a physician, after the operation, showed him a card from an agent of a surgeon in Chicago, offering 50 per cent. commissions. This practitioner also showed him a letter from a local surgeon, who solicited cases for 25 per cent. commission. Another case was mentioned of a physician in the same town who had gone personally to the attending physician in a case in behalf of a Chicago surgeon, and he had openly declared time and again that he was receiving a division of fees. The remedy should be the one President Roosevelt suggested for trusts—publicity—publicity through organizations, so that it will be impossible for men who are professors in leading medical schools and officers in medical societies to give commissions.

MR. WM. H. MCSURELY defined a grafter as one who allies or attaches himself to some outside interest, some interest apart from the main motive of his life, for the purpose of getting from that outside interest something that will be beneficial to the main motive of his life. He then spoke of lawyers and physicians as church grafters; the society grafters, etc.

DR. G. FRANK LYDSTON spoke of the physician in politics and public affairs, saying that the physician who devotes a portion of the years of his life to politics and to the public service is forever damned in the eyes of both the public and the medical profession. The reverse is true of the lawyer. In politics the lawyer attracts attention to himself. He said there were very few lawyers who rendered services in the interest of the public without salary, although this was frequently done by physicians.

NORTH BRANCH OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, Jan. 13, 1904.

Dr. Samuel Wolfe in the Chair.

Physicians' Relations.

The address of the retiring chairman was read by Dr. H. Brooker Mills, who, after remarking on the value of the organization of branches of the county society, urged that many unnecessary complications could be avoided by properly "training" the patient. He condemned commissions and urged that the medical man take sufficient rest to enable him to perform services of the highest character.

DISCUSSION.

DR. A. M. EATON urged the importance of thorough organization of the medical profession, believed that more attention should be given to the business side, and also felt that through organization much of the imposition which is practiced by the undeserving on the hospital clinics could be avoided.

The Diagnosis and Treatment of Internal Hemorrhoids.

DR. HERMAN A. BRAY divided hemorrhoids into (1) capillary hemorrhoids; (2) arterial hemorrhoids, and (3) hemorrhoidal tumors, which may also be termed respectively the first, second and third stages. In view of the fact that these conditions are also accompanied by hemorrhage, pain, protrusion and discharge of mucus, internal hemorrhoids are frequently confounded with cancer of the rectum, polypus of the rectum and prolapse of the rectum. The conflict is particularly apt to occur in children, in whom polypus and prolapse are not uncommon, while internal hemorrhoids are rare. Polypus and prolapse can be distinguished from hemorrhoids by a careful digital examination, which will reveal the presence of a pedicle to which the growth is attached, and malignant disease can be distinguished by the hard growths on the rectal wall.

He reported the case of a woman, aged 70, which had been diagnosed as internal piles, the patient having suffered from rectal hemorrhages and a constant desire to evacuate the bowels. Digital examination in the lateral and semiprone position revealed nothing, but digital examination in the erect position with the patient straining down showed a malignant stricture about four inches above the anus.

The first stage of the hemorrhoidal development is the most difficult of diagnosis, and in many cases aid will be secured in this direction by making the examination immediately after the bowels have been emptied by means of an enema and by having the patient strain down.

Treatment should be considered with reference to the cause, which may be either constipation, retroversion of the uterus, foreign body in the rectum, pregnancy, or straining during micturition, as from stricture or enlarged prostate. Palliative treatment is not effective in the third stage, but is successful in the first and second. The cause should always be ascertained and removed, if possible. Constipation should be avoided, the diet regulated and alcohol and tobacco used only in moderation, if permitted at all. Mild aperients, massage of the sphincter, and the injection of two ounces of olive oil at bedtime, are beneficial in regulating the bowels. Hemorrhage is most efficiently relieved by the application of cold astringents. After each defecation cold water should be injected and the addition of 10 grains of tannic acid is very efficient.

As a means of palliative treatment he injects into the pile five to ten drops of a solution composed of one part of pure carbolic acid, two parts of glycerin and two parts of water. He frequently injects two or three tumors at a time, but did not recommend that more than one be injected by the novice, and the sittings should be a week apart. Following this treatment, the tumor gradually lessens in size, and in a few weeks the pain and discomfort will disappear. In the cases of strangulated piles, immediate operation should be performed, but if the patient will not permit this, applications of lead water and laudanum lotions afford great relief and reduce the edematous swelling, so that the piles may be replaced. He described fully the operation he performs. After tying the piles with a ligature, he does not cut them off, but inserts a rubber tube in the rectum and keeps the bowel confined for about four days, after which action is secured by means of purgatives or enema, if necessary. Next to the ligature operation, he believes the clamp and cautery operation as performed by Henry Smith to be the best. The patient should be kept under observation for at least three weeks after the operation, being allowed about the room after the first week or ten days, but should be in a recumbent position the most of the time for the balance of the period.

DISCUSSION.

DR. COLLIER FORD MARTIN commented on a method that is of value in some cases, i. e., stretching the sphincter. He was not inclined to view treatment by injection as a palliative measure, but believed that practically all cases adapted to its use should be cured. In fibroid piles, however, the radical operation is very much better. He did not believe that the sloughing following injection was a consequence of this method, but was due to the lack of proper aseptic precautions, or to the use of too strong a solution or of too much fluid. It is well in all cases in which there is the least tightness or irritability of the sphincter to divulge the same under nitrous oxid prior to the injection. The injections should be made through a tubular speculum, one at a time, and the sittings should be a week apart. He prefers the weaker solution, and is at present using the French phenol-sodique. The piles usually disappear in about two or three weeks after the operation. He had had no experience with the ligature method.

DR. FRANK C. HAMMOND stated that he had seen eight cases operated on with the electrothermic cautery, used by

Dr. Andrew J. Downes, and absolutely no pain was complained of.

DR. BRAV did not believe a speculum was necessary to diagnose internal hemorrhoids; he recommended digital examination with the trained finger.

The discussion then left the subject and turned on the presence of pins and needles in all parts of the body, many cases being reported.

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines of treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Colonic Lavage.

The following technic of colonic lavage is recommended by M. H. Mack in *Med. Standard:*

The patient must be placed on his back with the limbs well elevated. The colon tube is passed into the bowel only a few inches; it is not necessary to carry it beyond the sigmoid as the water easily enters the colon with the tube just inside the sphincter. The temperature of the water may vary from that of ice water to 130 F., though it is preferably used at a temperature of 110 to 120 F., in most cases. Hot and cold water may be alternated, if desired, or the hot followed by cold when a stimulating effect is desired. After placing the tube into the bowel, the nozzle of the irrigator is attached, and from eight to twelve ounces of water allowed to pass in, rarely more without giving the patient pain.

The nozzle is then disconnected and the water siphoned out. This may be repeated several times. The patient should be allowed to judge as to the amount of water to let in at one time.

He employs this method of treatment with good success in constipation due to various causes and especially in that due to catarrhal conditions of the bowel, in diarrhea, dysentery, typhoid fever, hepatic atrophy, kidney diseases and other varieties.

Eczema of the Scalp, Eyebrows and Beard.

The following combinations are recommended by *Jour. des Pract.* in the treatment of eczema involving the scalp, eyebrows and beard:

B.	Olei cadini	3v	20
	Olei amygdalæ dulcis	ʒiiss	75
M.	Ft. ung. Sig.: Apply locally; or:		
B.	Zinci oxidi	ʒiss	6
	Hydrarg. chloridi mitis	gr. xlv	3
	Adipis	ʒi	30
M.	Ft. ung. Sig.: Apply locally.		

And for the involvement of the beard the following:

B.	Zinci sulph.	gr. c	6 | 65
	Cupri sulph.	gr. xxx	2 |
	Croci (saffron)	gr. v	| 30
	Aq. camphoræ	ʒvii	210 |
M.	Sig.: Dilute with two parts of water and apply locally.		

Diseases of Lid Margins.

Wolffberg, in an abstract in *Oph. Record*, recommends the use of benzine and hydrogen peroxid in the removal of scales and crusts from the margin of the eyelids in blepharitis marginalis. Benzine can be used in full strength and is applied by means of a piece of cotton to the slightly everted lid margin. The crusts are easily removed, the ulcers exposed, which renders the application of the yellow salve more productive. The application of benzine may be used once daily. Hydrogen peroxid is also of service, and may be dropped directly on the infected lid margin. He also uses it in the treatment of catarrh of the conjunctiva in combination with cocain.

Malaria.

In the treatment of malaria, Dr. S. Harris, in *Ther. Gaz.*, states that he commences giving quinin in three to five grain (.20-.30) doses every three or four hours just as soon as a diagnosis is made and continues it until the fever subsides, instead of following the usual custom of beginning its administration at the close of the paroxysm. If the patient is seen during the chill or while the fever is at its height and nervous symptoms are present, such as headache, backache, and pain in the limbs, a hypodermic of morphin gr. 1/8 to gr. 1/4 (.0075-.015) combined with atropin gr. 1/150 (.0004) is given along with the quinin. If constipation is present a large initial dose of calomel is given, combined with soda, hyoscyamus and podophyllin, also paying careful attention to elimination by the kidneys, and to combat the intestinal toxemia he combines with the quinin, salol in three or four grain (.02-.015) doses. Saloquinin, which is the salicylic ester of quinin, is sometimes substituted, given in fifteen to twenty grain (1.-1.20) doses every four hours, but it does not, in the author's opinion, possess any advantage over the foregoing combination of salol and quinin. Later in the disease, to combat the severe headache and backache, he recommends the following combination:

B.	Codeinæ sulph.	gr. ¼-½	.015-.030
	Phenacetini	gr. iii-iv	.20-.25
M.	Ft. cap. No. i. Sig.: One such capsule as necessary to relieve the subjective symptoms.		

The following combination is recommended by the author in both the intermittent and remittent forms of malaria:

B.	Quin. sulph.		
	Salol, āā	gr. xl-3i	2.65-4
	Codeinæ sulph.	gr. iii	.20
	Phenacetini	gr. xxx-xl	2-2.65
M.	Ft. capsulæ No. xii. Sig.: One capsule every three or four hours.		

To insure the solution of the capsule 10 drops (.6) of dilute hydrochloric acid is given after each dose. Or the quinin may be given in solution as follows:

B.	Quin. sulph.	gr. l-lxxx	3.30-5 | 30
	Acidi hydrochlor. dil.	3iss-iss	6.-10 |
	Tinct. zingiberis	3iss-iv	10.-15 |
	Tinct. opii camph.	3ii-iv	8.-15 |
	Syr. limonis	ʒii	60 |
	Aquæ q. s. ad	ʒviii	240 |
M.	Sig.: One tablespoonful every four hours in water, taken through a straw.		

In those cases where the untoward effects of quinin are sufficient to prevent its use in large enough doses to obtain its full antimalarial effects the following combination is employed:

B.	Methylene blue	gr. i	.06
	Quininæ sulph.	gr. ii	.12
M.	Ft. cap. No. i. Sig.: One such capsule every four hours.		

For the treatment of the anemia following both the intermittent and remittent forms of malaria, the so-called "malarial cachexia," the following combination is recommended:

B.	Quin. sulph.	3iss	6
	Ferri reducti	3i	4
	Ext. nucis vom.	gr. viii	.50
	Acidi arsenosi	gr. i	.06
	Ext. colocynth. co.	gr. x-xv	.65-1.
	Podophyllini	gr. i-iii	.06-.20
	Mellis q. s.		
M.	Ft. cap. No. lx. Sig.: One pill after each meal.		

As an initial purgative in the treatment of malaria, W. Krauss recommends the following:

B.	Hydrarg. chloridi mitis	gr. v	.30
	Podophyllini	gr. 1/3	.02
	Ext. nucis vom.	gr. i	.06
	Aloini purif.	gr. 1/3	.02
	Pulv. arom.	gr. viii	.50
M.	Ft. cap. No. iv. Sig.: One every two hours.		

If it is necessary for this to be followed by a saline, thiosulphate of sodium is given in doses of two and a half drams (10.) dissolved in a glass of water. As a substitute for quinin in cases of malaria this author recommends eu-

quinin in somewhat larger doses. In his experience it has acted quite favorably, is easily borne by delicate stomachs, and is a good remedy for children.

As a mixture to be used intravenously the following combination is recommended:

℞. Quin. bimuriatis	gr. vii	50
Antipyrini	gr. iii	20
Aquæ	gtt. xx	1 30

M. Sig.: To be injected intravenously.

The antipyrin aids in the solution of the quinin. This solution should not be used in cyanosed cases where antipyrin is non-indicated.

In the latent or masked forms of malaria the following combination is recommended by the author:

℞. Quin. hydrobrom.	gr. xxx	2
Hydrarg. chloridi mitis	gr. v	30
Pulv. capsici	gr. iss	09
Pulv. doveri	gr. v	30
Aloini purif.	gr. 1/6	01

M. Ft. cap. No. vi. Sig.: One every four hours.

J. B. McElroy recommends the dihydrochlorate of quinin as having advantage over the other salts in having a larger percentage of the alkaloid, in being less bulky, more soluble, less liable to irritate the stomach and can be given hypodermically.

By hypodermoclysis fifteen or twenty grains (1.-1.30) of the bimuriate of quinin and urea are dissolved in a pint of normal salt solution, sterilized, and the entire amount given as a saline infusion.

As a tonic and reconstructive in malaria the following is recommended by H. A. West:

℞. Acidi arsenosi		
Strych. sulph., āā	gr. i	06
Chinchonidinæ	3iiss 10	
Ferri sulph. ex sic.	3ss 2	

M. Ft. pil. No. xxx. Sig.: One to be taken three times a day after meals.

Euquinin, which is quinin carbonic ether, is recommended by *Merck's Archives*, combined as follows, in the treatment of malaria during convalescence:

℞. Euquinin	gr. c	6 65
Ferri sulph. ex sic.	gr. xx	1 30
Acidi arsenosi	gr. i	06
Pulv. capsici	gr. x	65

M. Ft. cap. No. xl. Sig.: Two capsules three times a day; or:

℞. Methylene blue		
Euquinin		
Pulv. myristicæ, āā	gr. xl	2 65

M. Ft. cap. No. xx. Sig.: One or two, four times daily for two days, then one three times daily.

[The nutmeg seems to prevent the nausea caused by the methylene blue.]

To prevent the subjective symptoms, such as ringing in the ears, the following combination is recommended:

℞. Quin. hydrochlor.	3ii	8
Acidi hydrochlor. dil.	3iii	12
Acidi hydrobrom. dil.	3i	30
Syr. limonis	3v	20
Aquæ q. s.	3iii	90

M. Sig.: One teaspoonful three times a day between the paroxysms.

Erysipelas—Poison Ivy.

A subscriber sends to this department the following formula, a very efficacious one, as shown by his long experience with it, in the treatment of erysipelas:

℞. Tinct. ferri chloridi	3vi	180
Quin. sulph. (to saturation).		

Sig.: Ten drops to be taken every four hours and the same mixture painted over the affected area thrice daily.

He has also derived most favorable results from the following in the treatment of poison from rhus toxicodendron.

℞. Ext. serpentariæ fld.	3iii	90

Sig: To be painted over the affected areas three times a day.

Medicolegal.

Eighty Thousand Dollars for Personal Injuries.—In the case of the International and Great Northern Company vs. Moynahan, mentioned Feb. 6, 1904, page 394, Moynahan received $20,000, and not $80,000. THE JOURNAL'S attention has been called to the fact that an error was made in the original report of the court proceedings.

North Carolina—To Promote Medical Science.—Chapter 666 of the Public Laws of North Carolina of 1903 provides that the professors of anatomy of the several medical schools of the state shall be a board for the distribution of the unclaimed bodies of persons who at the time of death were prisoners under sentence for crime. But the body of a confederate soldier or of the wife of a confederate soldier is to be excepted from the provisions of this act, and the body of no white person shall be delivered to any school for the colored race. The bodies obtained hereunder shall be embalmed before use for dissection.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below. Titles of articles will be listed but once, though the articles appear later in other journals.

New York Medical Journal.

February 13.

1 *Conservative Treatment of Some Surgical Diseases of the Renal Pelvis and the Ureter by the Uretercystoscope. F. Kreisel.
2 *Personal Experiences with the Administration of Nitrous Oxid and Oxygen for Prolonged Anesthesia. Prescott Le Breton.
3 *Original Research Regarding Human Perspiration, etc. Julius E. Hoelscher.
4 *Artificial Fluorescence of Living Tissue in Relation to Disease. (To be concluded.) William J. Morton.
5 *Fluorescein in Transillumination of the Stomach. Robert C. Kemp.
6 *Truneck's Serum. Swithin Chandler.
7 *Brief Review of the Etiology of Yellow Fever. (Concluded.) James Carroll.

1. **Uretercystoscope.**—This instrument is considered by Kreisel from his experience as having had its utility greatly exaggerated; it is useful, but its sphere is limited. It is itself to some extent an irritant in pathologic conditions, and its limitations are marked in cases with reduced bladder capacity, stenosis of the ureteral orifice, distorsions, twists or kinks of the ureter, and blocking of the catheter by pus and blood clots. He, however, finds it possibly useful to some extent in hydronephrosis, pyelitis, pyonephrosis, ureteritis, pyelonephritis, renal retention and colic obstructions of the ureteral lumen by calculi, blood clots or pus, strictures or displacements and encroachment on the ureter from external pathologic conditions outside. In only a few of these cases can permanent results be obtained by this method, though temporary relief may be more common. He reviews the various methods, and speaks well of the use of the retention catheter in the ureter in some of these cases, such as pyelitis and renal retention. He thinks fistula following various operations on the ureter and renal pelvis will be rarely observed if the catheter is left in the renal pelvis and the ureter for the first three days after operation.

2. **Anesthesia.**—Le Breton describes the method of using nitrous oxid and oxygen for prolonged anesthesia, and tabulates a number of cases where it was thus employed. His conclusions are:

The use of nitrous oxid and oxygen for prolonged anesthesia is satisfactory, but limited. The wealthy class alone can demand it, because of the cost of materials and the larger fee for the engagement of an experienced anesthetist. The bulky and expensive apparatus, and the difficult method of administration are not inviting, and the occasional lack of smoothness in the narcosis discomfits the surgeon. Hence the employment of this method will be reserved for anesthetists in the larger cities. In the case of operations on the extremities or trunk where the condition of the patient demands an anesthesia free from danger and practically free from after-effects. The deservedly increasing popularity of the gas and ether combination predicts a similar popularity of the use of gas, oxygen and ether, when the gases are used until the incision is made and after the suturing is begun, and the ether provides complete relaxation and freedom from cyanosis during the operation proper. The contraindications are chronic alcoholism and well-marked arteriosclerosis or cardiac lesions.

3. **Perspiration.**—Hoelscher reports experiments on the human perspiration under the influence of drugs and in certain pathologic conditions. After a thorough cleansing, he enveloped his subjects in sterile gauze and over this secured an oil cloth. The subject was then subjected to dry heat not over 120 F. for one to two hours. When the point of tolerance had been reached, the soaked gauze was quickly removed, submitted to pressure, and the sweat collected, the amounts ranging from 3 to 32 ounces. He offers the following deductions from the experiments: 1. The hot air causes an aseptic fever or temperature elevation, despite the antipyretic action of acetanilid, sodium salicylate and quinin. He can not explain why they do not reduce the temperature. Acetanilid has no effect on the normal temperature in healthy persons and acts only in fever. It generally lessens the pulse-rate, decreases heat production and sometimes increases arterial tension. 2. The hot-air bath is of decided value in acute and chronic uremia, shown by the fact that the perspiration contains a considerable excess of urea and nitrogen. He does not recommend it to the exclusion of other measures, but as an important adjunct to treatment. The secondary effect on nutrition should not be forgotten. 3. In articular rheumatism in conjunction with salicylates, the hot-air bath gives more rapid results and lessens cinchonism. 4. Certain types of myocarditis seem to be benefited by the hot-air bath, and he reports a case. 5. Pilocarpin should never be used without the aid of hot applications to the body. So combined, there is no sialagogue and less toxic drug effect, and far more sweating than otherwise. 6. Three cases of catarrhal jaundice were sweated; all the tests failed to show bile pigments, only the epithelial débris containing bile deposits. 7. Modern sugar tests failed to reveal sugar in the sweat from diabetics. 8. A case of chronic constipation and indicanuria did not disclose the presence of indol or skatol in the sweat. 9. As regards the function of eliminating normal and abnormal substances, the skin is not to be compared with the kidneys. 10. Free sweating seems to favorably affect psoriasis, though further study is required, as also the effect on other skin diseases. Lastly, 1,000 c.c. of sweat contains about 11.5 gm. of solids (nearly 3 drams), one-half inorganic and one-half organic, and about .6 gm. (9 grains) of urea and .47 gm. (8 grains) of nitrogen.

4. **Artificial Fluorescence of Living Tissue.**—Morton gives his methods of introducing solutions or mixtures capable of fluorescence into the system, and the employment of an agency, external or internal, to excite fluorescence, either radium or the Roentgen rays. He concludes that artificially produced fluorescence of the human tissues is a well-grounded therapeutic measure. (This paper is to be concluded.)

5. **Fluorescin in Transillumination of Stomach.**—Kemp describes his method of using a solution of fluorescin in sodium bicarbonate solution, taken internally, for aiding in the transillumination of the stomach. He claims brilliant results. He suggests that the use of fluorescin solution, such as he describes, is also worthy of investigation for the purpose of cystoscopy.

6. **Trunecek's Serum.**—Chandler has employed this preparation in arteriosclerosis and asthma from the same cause, rheumatism, cerebral circulatory disturbances, tinnitus, anemia and senile fibrosis. Six cases are reported. It gave good results in rheumatism and arteriosclerosis, and he finds it a very useful aid in arterial hardening and tenseness in cases that required operation. The method of administration was by the mouth, 16 c.c. twice daily. Hypodermically, the dose is 2 c.c. daily. In his hands this method proved itself efficient, and he considers it the surest and best mode of its employment.

7. **Yellow Fever.**—Carroll's lecture is concluded. He gives the results of investigations including his experiments at Santiago, which proved that the infectious agent of yellow fever can be transferred through a filter that is impermeable to ordinary bacteria. Also that the infectious property of blood drawn from a yellow-fever patient is destroyed at a temperature of 55 C. maintained for ten minutes. In conclusion, he calls attention to some early experiments in the beginning of the last century by a student in the University of Pennsylvania, who evidently came very near proving the inoculability of the disorder, though his conclusions were that the disease was neither infectious nor contagious. The experiments were certainly striking ones.

Medical News, New York.

February 22.

8 *Abdominal Pain of Intestinal Origin. Frederick H. Wiggin.
9 *Dietetic Treatment of Arteriosclerosis. Thomas L. Coley.
10 *Enlargement of the Phalanges in Rickets; a Report of Two Cases. Jacob Sobel.
11 *Treatment of Pneumonia. Delancey Rochester.
12 *The Sanitary Aspect of Food Preservatives. R. G. Eccles.

8.—See abstract in THE JOURNAL of February 13, p. 484.

9. **The Diet of Arteriosclerosis.**—Arteriosclerosis is a condition usually occurring after overexertion or in overfed individuals, and in highly nervous, ill-nourished persons. The dietetic treatment is of importance as bringing about a proper condition of metabolism in the patient. The restrictions for patients suffering from this condition laid down by Coley are, in substance, as follows: The quantity of food should be reduced, not more than one-half or two-thirds of the general average for the body weight being required. The quality is important. The proteids are to be reduced, not excluded. Meat should be taken but once daily and in small amount. The food should be well cooked and large amounts of fat avoided, as well as other undigestible substances. Alcohol, tea, coffee, cocoa, as well as tobacco, cut off or used in extreme moderation. The ingestion of large quantities of fluid should be curtailed. Regulation of meals is important. The breakfast should consist of fruit, cereal with cream, and perhaps an egg poached or soft boiled. Dinner, five or six hours later, should be the heaviest meal, and consist of soup, fresh meat and vegetables, but overfeeding should be avoided, and between dinner and supper another five- or six-hour interval should elapse. The meal should be light, and consist mainly of fruit and cereals. In general, a comparatively dry diet is indicated, and the patient should not eat between meals. Elimination should be kept at its maximum of efficiency.

10. **Rickets.**—While the general osseous changes in rickets are well known and described in text-books, Sobel remarks that the changes in the fingers have been noticed by but comparatively few of the authors. He reports two cases where this peculiarity was noticeable. He thinks the condition is very frequently overlooked from lack of attention, and suggests for it the name "rachitic dactylitis."

11. **Pneumonia.**—Rochester summarizes the general treatment of pneumonia as follows: 1. The sustaining of the metabolic processes of the individual by the administration of easily digested or predigested foods in small quantities at stated intervals, the administration of large amounts of pure water for eliminative purposes, and the administration of oxygen gas by inhalation whenever the absorbing surface of the pulmonary mucosa is involved to such extent as to interfere with proper metabolic oxygenation. 2. Elimination, (*a*) by the liver and bowel through the vigorous use of calomel and salts; (*b*) by the skin through sweats induced by external heat; (*c*) through withdrawal of blood when indicated by right heart distention. 3. Stimulation of heart by strychnin, alcohol or ammonium carbonate, and in suitable cases by the subcutaneous injection of normal salt solution. 4. The local treatment of the lung by leeching, wet cupping or dry cupping as indicated. He retabulates a series of cases published in his former article in THE JOURNAL of Nov. 9, 1901, and adds a tabulated statement of 42 more cases. Excluding fatal cases over 50 years of age, and delicate, intemperate or complicated cases, Townsend and Collidge had a ratio of 10 per cent. in 1,000 cases treated at the Massachusetts General Hospital. Rochester has a 10 per cent. mortality without excluding such cases, and if he should exclude such, it would reduce the death rate to 2.5 per cent. He thinks, however, since the cases were not selected, most of them being hospital cases, he is justified in concluding that better results were obtained from the method here indicated

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than by any other of which statistics are afforded. He gives the details of its application.

12. **Food Preservatives.**—Eccles' article is similar to his former one. He points out the comparative innocuousness of salicylic acid. He says the use of such food preservatives has been increasing for the last thirty years, and public health has been increasing almost with equal steps. He notes particularly the use of beer, in which salicylic acid is largely used, and finds that, aside from the effects of alcohol, the special diseases that can be attributed to preservatives are much less in beer drinkers than in non-drinkers. The users of salicylated and borated food appear to be freer from disturbances of the digestive system than those whose location and habits would seem to contraindicate the suspicion that they use such preservatives freely. The death rate, for instance, of clergymen from diseases of the digestive system is 106.5, while that of saloonkeepers from the same cause is only 60.4. Salicylic acid in beer does not seem to be especially fatal. Moreover, he says, if the oft-repeated charge that salicylic acid interferes with digestion is true, what of it? The claim that rendering part of the food we eat indigestible is injurious to health, is a superstition of so-called sanitary science. In the small amounts in which it is used in foodstuffs it retards digestion but little. When its compensating quality of acting as a stimulant to the stomach is brought into play it overcomes its retarding power and becomes an aid to digestion. In support of this he quotes from Bartholow and Cushny.

Medical Record, New York.
February 22.

13 *Some Personal Observations and Experience of the Schott Treatment of Heart Disease. William W. Baldwin.
14 *Contribution to the Study of Spondylose Rhizomélique, with Report of Three Cases. Alfred Gordon.
15 *Antiseptic Treatment of Pneumonia in Infants and Children. S. Henry Dessau.
16 *Hernia in Young Children. W. B. De Garmo.
17 Radiotherapy, with Report of Cases. D. C. Dennett.

13. **The Schott Treatment.**—Baldwin describes this method and its advantages, noticing also the contraindications which are advanced arteriosclerosis, advanced chronic Bright's disease, aneurism of one of the larger arterial trunks, cases of bronchial asthma and chronic bronchitis, all of which indicate a milder and slower course of treatment. While he has never employed this treatment in cases of heart disease complicated by tuberculosis, Beely Thorne has often employed it thus to advantage. In very grave cases of organic heart disease, where muscle degeneration is far advanced, other remedies should, at least, be tried first. In cases of great anemia and emaciation in which the effervescent baths are not well borne, carefully regulated, mild brine baths have an excellent curative effect. As a general rule, in all the grave cases where the stronger stimulating baths cause palpitation, asthmatic symptoms and cardiac weakening, irregularity of pulse, cyanosis and other unfavorable symptoms, we should return to the mild brine baths for a time. Some patients have too tender skins for any effervescent baths, and, of course, they are contraindicated. He thinks the artificial Nauheim baths are valuable, but if possible he sends his patients for an additional course at Nauheim. The Schott resistance exercises are also described; he thinks every physician should learn to practice them. They can be given before the baths can be safely employed, and, in his judgment, can be continued indefinitely, can be employed to suit almost any indication of general strength or debility, and the patients can teach themselves. They are admirable respiratory exercises, exert a tonic influence on the heart muscle, and must eventually prove of great therapeutic value. Long-continued effervescent baths at first are a mistake. Any half-hearted, pottering method of treatment is also condemned. Extreme care and prudence are necessary in these cases. One should always employ a trained nurse to assist in giving the baths, even when the physician is present.

14. **Spondylose Rhizomelique.**—The following are the conclusions of Gordon's article:

1. While Bechterew's, as well as Strümpell-Marie's, ideas can not be accepted in the sense of the existence of two sharply defined clinical entities, the other view of considering all cases of spondylosis as an expression of rheumatism for the simple reason that the patient some time during life presented a history of rheumatism, can not be equally accepted. The onset, course, and termination are in some cases not those of rheumatism.
2. A great many cases recorded, if not all, present distinct symptoms of cord involvement showing that the etiological factor is of a more complicated order than one may suppose.
3. Between the types described by Bechterew, Strümpell and Marie there are a great many intermediary forms.
4. Spondylosis is only a symptom of a more complicated disease, the etiological factor of which is not at all elucidated.

15. **Pneumonia in Infants.**—Dessau advocates the use of carbolic acid as an internal remedy for both the bronchial pneumonia and the lobar pneumonia form of the disease, and reports a case as illustrative of its value. In it he gave internally 1 dram of a 2 per cent. solution of carbolic acid every two hours, and had creosote and eucalyptus evaporation in the sick room. He thinks it probably anticipates the crisis, and the actual crisis is converted in a more gradual termination or lysis. There is no doubt, he says, that the remedy is harmless when given in the dose recommended. The early detection of albumin in the urine is a good guide as to favorable or unfavorable prognosis, according to the amount found. The fact that albumin is found is not a contraindication.

16. **Hernia in Children.**—The causes and pathology of hernia in infants are noted by De Garmo, who tabulates the indications for operating in early life as follows:

1. Strangulated hernia—immediate operation.
2. All cases not controlled by truss.
3. Occasional protrusion with threatened strangulation.
4. When truss-wearing causes pain.
5. On children that can not be brought regularly for attention.
6. In all cases of femoral hernias.
7. On all children over 7 years of age.

His prejudice against operating on quite young children has become less every year, but he would not operate on all, because 90 per cent. of the cases under three years of age may be cured by mechanical means and proper care. After the child passes the sixth or seventh year, a non-operative cure is rare. He remarks that strangulated hernia is not as serious a matter in infants as in adults. It rarely happens that proper manipulation under anesthesia can not reduce the hernia.

American Medicine, Philadelphia.
February 13.

18 *A Case of Gunshot Wound of the Brain. John A. Wyeth.
19 *Prevention and Treatment of Puerperal Infection. Richard C. Norris.
20 *Myxoneurosis Intestinalis Membranacea. C. A. Ewald.
21 Suburethral Abscess. Richard F. Weeds.
22 *Value of Histologic Examination in Carcinoma of the Uterus. Brooke M. Anspach.
23 Facial Paralysis. Norton L. Wilson.
24 *Drainage of the Chest in Empyema. Leon Brinkman.
25 Medicus et Medica. (Concluded.) Helen MacMurchy.

18. **Gunshot Wound of the Brain.**—Wyeth reports a case where a spherical bullet had lodged in the skull, and was removed by operation five months later, proper drainage being secured. There had been previously extensive suppuration, and the symptoms more or less correspond. He remarks that the case would probably have done better had immediate search for the bullet been made to remove it earlier. In cases where a bullet has passed through the skull, he would clear out the wounds of entrance and exit, and enlarge these to remove the loose fragments and arrest, by ligation, hemorrhage in the scalp wound and dura. Hemorrhage from the brain substance should not be arrested, for fear of compression by retained clots, but ligation of the extremities may be practiced to diminish pressure in the injured region. When the hemorrhage has ceased, the blood thus retained in the veins may be gradually and carefully returned to the general circulation. Where the foreign body has lodged and is small and no hemorrhage has occurred and no functional disturbance, he would advise careful aseptic treatment of the wound of extrance, enlarging it for the purpose of removing loose pieces and for the assurance that the foreign body has penetrated beyond the dura into the brain. When the missile is of larger caliber or serious symptoms of injury to the brain are present, the wound of entrance should be thoroughly exposed and cleansed, broken pieces of bone removed, and efforts

made to locate the foreign body with a view to its removal. The Roentgen ray is of aid in this respect. When it is available, no exploration along the track of the missile should be undertaken. When it can not be had, however, he favors very careful, non-forcible probing, and reports a case where this was done with advantage.

19. **Puerperal Infection.**—Norris discusses the subject of puerperal infection, giving the result of 1,900 successful deliveries which seem to favor the abandoning of the douche. The morbidity from infection was only 1 per cent. as against over 3 per cent. when the douches were employed. He believes in a thorough study of the case, exploration of the infected area and curettage where there is evidence of roughened areas or débris, and the use of disinfecting douches in case of putrid endometritis. When, as is rarely possible, we find the uterus empty, neither the curette nor douche are indicated. Salpingitis progressing to abscess requires evacuation and drainage, in the more favorable cases by the vaginal, but more often by the abdominal route. General peritonitis will usually prove fatal unless the surgeon is aggressive and operates early. As regards hysterectomy for puerperal infection, he considers the question still unsettled, and even when the diagnosis can be made of septic endometritis or abscess, the necessity for hysterectomy is not always plain. Norris does not seem to have a high opinion of the practical value of bacterial examinations in these cases. The constitutional and general treatment requires little discussion. Free stimulation and nutrition, ice coils to the abdomen, digitalis, quinin, strychnin, etc., and the free use of subcutaneous and rectal injections are of value. Serum therapy has been disappointing. He has nothing favorable to say of intravenous injection of antiseptics. In quantity sufficient to do good, they would probably damage the blood and do more harm than good. In conclusion, he says we should not forsake well-tried old methods for new ones. The gravest forms of puerperal infection can best be prevented by early recognition of beginning infection and prompt resort to well-tried measures.

20. **Myxoneurosis Intestinalis Membranacea.**—This is the name given by Ewald to a nervous intestinal affection, characterized by mucous discharge. Closely allied to it is another clinical type, colica mucosa, with griping pains. In both cases the stools, aside from the small masses of fecal matter, are composed almost entirely of mucous masses. There are other nervous symptoms, intermittent colicky pain, sometimes bladder symptoms and stubborn constipation. The indications for treatment are to empty the bowels without the use of strong and especially without saline agents, the relief of pain without the use of narcotics and to obviate the sequels of constipation, such as gas formation, dyspeptic symptoms and auto-intoxication. He advises the injection of oil and vegetable laxatives, such as senna, castor oil, flaxseed, etc., and proper diet regulation, the use of coarse breads and coarse vegetables, fruit juices, etc. Most of the dietetic measures are known to the laity, who try the various systems on themselves. Where these are not sufficient, he thinks it well to use mineral water, massage, electricity, room gymnastics, hydrotherapeutics, especially the Scottish douche, or alternating of cold and hot douches. In cases of spastic constipation, the coarse diet may be contraindicated, and opium and belladonna internally, or in combination as suppositories, and oil injections work well. A mild, non-irritating diet should be instituted. He suggests the following diet scheme when constipation does not exist: Breakfast: Sweet milk, cocoa, oatmeal with cocoa, white or dark bread, with honey, jam, or fresh fruit. Dinner (preferably at midday): Vegetables or fruit, as apples, plums, blueberries, raspberries, cherries, a broth or vegetable soup, spinach, tomato or beet soup, a milk soup or curded milk, butter, and a liberal amount of fresh vegetables are desirable, or pea, rice, or lentil soup, stewed vegetables with dumpling, maccaroni, puddings, blanc mange with fruit juices, etc.; salads and eggs variously prepared, bread with butter, and a light cheese. Supper: A thick soup, made with barley, rice, tapioca, etc., baked potatoes, eggs, bread, butter, cheese, milk, etc.

22. **Carcinoma of the Uterus.**—The importance of the routine histologic examination of cervical tissues and of curettage material from the uterus is insisted on by Anspach.

24. **Empyema.**—The operation here suggested by Brinkman for chest drainage in empyema varies from that of Beck in offering more facility for manipulation within the chest cavity, a wider range of lung expansion and freer inspection. He makes a vertical incision in the mid-axillary line, exposing the fifth, sixth and seventh ribs, and lower, if needed. He reflects back the superficial portion in order to expose at least two inches of the ribs; dissects away the periosteum; divides the ribs, and after exposing the pleura makes a small, vertical incision at the lower angle of the wound, about the middle of the space previously made, to permit the gradual escape of pus. On complete evacuation, the incision of the pleura is continued upward until it reaches the upper angle of the wound. Free inspection of the chest cavity is made by retraction of the wound. If the lung is found bound down and collapsed in the upper portion of the chest, an attempt should be made to gently separate the adhesions. If these are too firm, they should be incised and blunt dissection resorted to, avoiding unnecessary force and laceration of lung tissue. When the condition is complicated by encysted pockets of pus, either interlobular or between the lung and posterior chest wall, it may be necessary to go as high as the third rib. The operation is finished by stitching the pleura and skin together around the entire wound, affording a large free opening for the escape of the succeeding secretion. Injury to the diaphragm should be avoided, and all incision should be made with this organ in view or touch, a finger introduced within the chest cavity as a guide, when going below the seventh rib. Before completing the operation the periosteum should be carefully dissected away, otherwise, during the repair and closure of the wound, masses of fibrous and calcareous tissue are formed. He remarks on the dangers of irrigating the chest cavity, and thinks it does not favor the decrease of the amount of discharge. Of the 27 patients treated with this method of drainage, only two had a protracted convalescence, and this would have been the case under any other method.

Cincinnati Lancet-Clinic.

February 23.

26 *Manual Support: Its Practice During Normal Labor as a Cause of Laceration of the Perineum. John Landis.
27 *Sporadic Tubercular Leprosy. A Case of Obscure Origin and Non-contagious Character. M. L. Heidingsfeld.

26. **Perineal Lacerations.**—Landis argues against the use of manual support to prevent perineal lacerations. It is irrational, he thinks, when we consider the mechanism, and is an interference that prevents the normal process. Any attempt to prevent extension of the head, he says, causes depression of the long arm of the lever and increases the pressure on the perineum to the extent of the counter-force used. Any attempt to favor extension hurries the process, and also favors laceration. The question is whether manual support deals with the causes better than unaided nature. He thinks that any support to the perineum encourages the accident it is designed to prevent.

27. **Leprosy.**—Heidingsfeld reports and illustrates a case occurring in a man who had been living thirty years in a country town in Arkansas, and had never traveled in countries where leprosy is indigenous nor had any known exposure. The case had been mistakenly diagnosed by numerous physicians, and was not suspected for many years. He had also been married and was the father of five healthy and vigorous children, none of them nor his wife showing the slightest evidence of the trouble. The non-contagious character of the condition was very strikingly illustrated by the case.

Medicine, Detroit.

January.

28 A Case of Septic Endocarditis. E. S. Dubs.
29 *The Mechanic Movements in the Cystoscopic Treatment of Kidney and Ureteral Diseases. Gustav Kollmeier.
30 *The Early Diagnosis of Typhoid Fever. Edward F. Wells.
31 Pemphigus Chronicus. B. A. Fischkin.

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32 *The Pathology and Treatment of Recent Fractures of the Patella. S. C. Plummer.
33 *Experimental Notes on the Treatment of Diabetes. Alfred C. Croftan.
34 *Relation of the Medical Department of the United States Army to the Profession. W. C. Borden.
35 The Intestinal and Stomach Reflexes. Albert Abrams.

29. **Kidney and Ureteral Diseases.**—Kollscher calls attention to the good effects of merely mechanical methods in the treatment of kidney and ureteral affections. He thinks mechanical methods are possibly responsible for the relief of symptoms which are ordinarily otherwise accounted for. In cases where no obstruction is present and suppuration has occurred, he thinks the pus and cellular débris may possibly have become attached to the wall and undergo decomposition, leading to the production of toxemia and certain symptoms which continue as long as these remain in place, but mere flushing of these deposits causes a rapid improvement, though the original trouble is not materially influenced.

30. **Typhoid.**—Wells emphasizes the importance of early diagnosis, based on the medical history of the patient, the symptomatology and careful study of the development of the disease from day to day, including examination of the urine, and blood and cultural experiments that will throw light on the subject, and all these should be subjected to a very rigid analysis in every case.

32. **Patellar Fractures.**—Plummer offers the following as a fair statement of the present status of the question of treatment of recent simple transverse fracture of the patella: 1. Operative treatment should never be undertaken unless under the very best conditions for asepsis. 2. Presuming ideal aseptic conditions, not every case should be subjected to operation, but only healthy patients of suitable age, with at least half an inch of separation of the fragments and lateral tears which compromise the "reserve extension apparatus," or in patients following arduous occupations. 3. Operative treatment meets the indications in a way the non-operative can only partially achieve, but good functional results follow the latter as a rule. 4. Early massage in all cases favors the early and complete restoration of function of the joint, and should always be employed. 5. The operation should be an open arthrotomy. 6. Absorbable suture material applied to the soft parts is sufficient in nearly every case.

33. **Diabetes.**—Croftan has found that the normal sugar content of the blood is destroyed on standing at blood temperature, and that the lymph possesses more sugar-destroying powers than the blood. The serum of the blood and lymph possesses no glycolytic power, nor do the red blood corpuncles. The leucocytes, therefore, are responsible. Glycolysis is not dependent on the life of these cells. The sugar-destroying agent is a non-organized chemical body, which he vaguely calls the glycolytic ferment. Its origin is not positively determined, but it is contained in all organs and tissues. The leucocytes probably act as carriers. The pancreas contains no more glycolytic ferment than some other organs, and he thinks that it and the adrenals probably act as regulators of sugar metabolism, and not as generators of a sugar-destroying agent. Their functions, however, are still very incompletely understood. Applying these data to the therapeusis, two paths are open: Either to supply glycolytic ferment in diabetes, or to stimulate the manufacture and liberation of this ferment by the administration of remedies that will so act. The former method has been tried and the results are not satisfactory, though something can still be done. He thinks the use of intravascular administration of zymase and the glycolytic ferment of yeast is promising. The administration of yeast by the mouth is also worthy of trial. The second method, that of stimulating the glycolytic process from within, has occupied him of late, and he has studied various factors to determine the intensity and rapidity of ferment action, such as the temperature of the medium and its reaction, the concentration of the solution in fermentable substances and their splitting products, and the presence or absence of certain chemical bodies (poisons and ions). The optimum temperature for the glycolysis is between 39.8 and 40 C., somewhat higher than the normal temperature of the body. In some institutions the temperature is raised artificially to promote sugar destruction. This is done by means of hydrotherapeutic procedures, and good results are reported. It is well-known, too, that the occurrence of infectious fevers in diabetes is often accompanied by a decrease or even a disappearance of the glycosuria. This, however, may be due to other causes. The reaction of the medium is of great importance. Slight alkalinity is the optimum; slight acidity greatly impairs, and great acidity as well as great alkalinity inhibit the action of the ferment. This may help to explain the good effects of alkali therapy in diabetes, and the tendency to increased glycosuria following diabetic acidosis. The presence of sugar, over 1 per cent. in quantity, retards the ferment action, and the same applies to the presence of splitting products, such as alcohol and lactic acid. There are no practical therapeutic suggestions from these facts. Finally, the effect of certain chemicals (ions) has been studied, and some important results obtained. Three substances should be mentioned as possessing the power of stimulating the ferment to an astonishing degree in very dilute solutions. These are the salicylates of the alkalies, the alkali carbonates (aside from their reaction), and carbolic acid in great dilution. In dilution above ½ molecular the tendency of all three substances is to retard; below 1/80th molecular their effect is indifferent, and at about 1/25th their effect is greatest. The suggestion of giving these remedies internally has been followed out empirically, and some authors report exceedingly favorable results with carbolic acid or the salicylates.

34.—See abstract in THE JOURNAL, xli, p. 1041.

Brooklyn Medical Journal.

February.

36 Address, Medical Society of County of Kings. James P. Warbasse.
37 *Beck's Operation for Hypospadias. A. T. Bristow.
38 Normal Involution of Appendix. Robert T. Morris.
39 *Further Observations on the Controlling Influence of Ovarian Plexus. W. L. Chapman and L. N. Foote.
40 *Concerning the Clinical Signs of Ectopic Gestation. Edward J. Morris.
41 *X-ray Therapy—Its Limitations. John A. Lee.

37. **Beck's Operation for Hypospadias.**—Bristow describes Beck's operation of extending the urethra to the normal meatus in cases of hypospadias, and reports a case where he operated three times according to this method. He advanced the urethra each time, but without meeting with complete success until the third operation, mainly because he did not go far enough toward the pubes in the beginning and free enough of the urethra to admit of its proper stretching. The final result, however, was excellent.

39. **Ovarian Plexus.**—A former work by the authors is first mentioned (see abstract in THE JOURNAL, vol. xxxvii, 43, p. 1730.) Chapman and Foote remark further in favor of the conclusion that the ovarian plexus is the controlling nerve supply to the essential female organs of generation. The grounds for this opinion are summed up as based on the following:

1. The anatomical distribution of the ovarian and uterine plexuses in relation to the functions of these organs. 2. The connections of the plexuses with the central nervous system. 3. The connections of these plexuses with trophic nerve centers and the dependency of the organs they supply on trophic nerve action. 4. The histologic structure of the plexuses, i. e., the character of the nerve fibers of which they are composed. 5. The importance of a joint nerve supply to the ovary, tube and uterus which is effected solely through the ovarian plexus. 6. The development of these organs in connection with their nerve supply, on which is based the hypothesis that the nerve supply to an organ which is developed jointly with that organ, is its essential nerve supply. 7. Observations on clinical cases which demonstrate that pathologic conditions involving the nerve fibers of the ovarian plexus disturb the functions of the ovary and uterus. 8. Experiments on pregnant cats, which showed that electrical stimulation applied to the ovarian plexus produced contractions of the uterus and fallopian tubes.

40. **Ectopic Gestation.**—Morris reports a case and discusses the symptoms. While the three principal signs, according to Vignard, viz., retarded menstruation, sharp colicky and abdominal pain, and small but persistent uterine hemorrhage accompanying them, are convincing when present, the exceptions are so numerous as to render diagnosis very difficult in some cases. The fact that it is not infrequent for a probable diagnosis only of ectopic pregnancy to be made before the abdomen is opened is sufficient evidence of this fact.

41. **X-Ray Therapy.**—Lee thinks that all epitheliomas, no matter of what type, will show a large proportion of apparent cures, even epithelioma of the cervix, and that the *x*-ray method will be the elective one in such cases. In all operable cancers surgery should be the treatment adopted. In small scirrhus where surgery is for any reason contraindicated, he thinks the *x*-ray might be used with favorable expectations, but in large cancers, the more removed with the knife and the less left to be treated by the rays, the better will be the results. There is a large field for investigation in the post-operative treatment of cancers by this method. It is a question, he thinks, whether all cases should be submitted to the rays directly after operation and before the liver becomes studded with nodular growths. In recurrent cancer, suitable cases properly treated will not show as unsatisfactory results as he has been obliged to report in the case here given. He has always believed that there has been too much surgery in recurrences, surgery which has not even the doubtful advantage of prolonging life. Recurrences along the scar, either ulcerative or of the type known as "en cuirasse," are favorable for the *x*-ray. Hardened, pea-like glands in the supra-clavicular region will readily submit to it. Large masses are not so favorable, and the time to treat recurrence is when it is first recognized, and no time should be lost. When involvement of either the liver or lung is shown it is hardly worth while to attempt to use the *x*-rays nor should rapid recurrence in tumor growths be treated. Exceedingly vascular tumors or rapidly progressive cases with a short history are not suitable. It may be stated as an axiom in *x*-ray therapy: The more acute the disease, the more hopeless it is; the more chronic the condition, the greater is the possibility of cure. The *x*-rays, he holds, do not prevent or affect metastasis, and as a palliative measure should only be used for pain. For this they are better than morphin and have none of its disadvantages.

New York State Journal of Medicine, N. Y.

February.

42 *Prolonged Fasting as a Factor in the Treatment of Acute Diseases. With Special Reference to Affections of the Alimentary Canal. Norton J. Sands.
43 Pott's Disease, Limited to the Atlas and Axis. Prescott Le Breton.
44 *When and How to Operate for Gallstones. Irving S. Haynes.
45 *Extradural Abscess and Mastoid Disease. Seymour Oppenheimer.
46 Typhoid Epidemic in Ithaca. Chauncey P. Biggs.

42. **Fasting in Treatment.**—Sands finds that prolonged fasting is a very excellent treatment, according to his experience, in typhoid fever, and that patients suffering from pneumonia and influenza, as also after severe injuries and after operations, also do better without nourishment for a while. The most convincing results, however, are in the gastro-intestinal disorders, such as typhoid. It is his rule when called to see a typhoid case to tell the family frankly that the patient should be kept on a strict water diet from eighteen to twenty-one days, assuring them of a more comfortable illness and more certain recovery. He finds that this plan relieves the abdominal symptoms, keeps the temperature lower and is otherwise generally beneficial. He summarizes as follows:

1. Acute illnesses in general, of any severity, do better without nourishment, for the reason that, on account of the fever and the poison of the disease, the food is not digested or assimilated; and, if not, adds a gastro-intestinal disturbance to the already existing disease. 2. In acute diseases of the alimentary canal in particular, all nourishment should be withheld until complete subsidence of symptoms. It is quite possible for a patient to fast twenty-one days, or even longer, without the development of any alarming weakness. 3. The indications for the allowance of food are the absence of abdominal symptoms, a cleaning of the tongue and a continuously normal or subnormal temperature.

44.—See abstract in THE JOURNAL, xli, p. 1150.

45.—Ibid., p. 1108.

Post-Graduate, New York.

January.

47 Education of Children with Impaired Hearing. Max Toeplitz.
48 *Dangers of Opium in Pneumonia. Stephen S. Burt.
49 Case of Dermoid Cyst of Both Ovaries. Charles F. Adams.
50 Treatment of Chronic Non-suppurative Disease of the Middle Ear. D. B. St. John Roosa.

48. **Opium in Pneumonia.**—Burt insists on the dangers of the use of opium in pneumonia. He thinks of all narcotics it is the one that tells most rapidly on the respiratory nerve centers. If, with a respiration of 60, or even 50 or less in the minute, the nerve centers are sent to sleep by a potent narcotic, it is obvious that the influence exerted at the critical time can not be otherwise than unfavorable.

Annals of Gynecology and Pediatry, Boston.

February.

51 *Some of the Cardinal Points in the Diagnosis of Abdominal Tumors. H. C. Crowell.
52 *Tuberculosis of the Peritoneum. Lewis S. McMurtry.
53 *The Causes of Failure Following Operation for Nephroptosis. Augustin H. Goelet.

51. **Abdominal Tumors.**—Crowell points out the special points in the diagnosis of these growths, and insists on the importance of the general practitioner's co-operating willingly and promptly with the surgeon in the study, diagnosis and treatment of these lesions.

52. **Peritoneal Tuberculosis.**—McMurtry describes the symptoms of peritoneal tuberculosis, and remarks that in a large number of cases of effusion, where the disease was not diagnosticated prior to laparotomy, he has been gratified to see an apparent permanent cure, some of these having been under observation from six to ten years. In a considerable proportion of apparently favorable cases, however, there was no improvement. He thinks in those cases of marked acuteness characterized by high temperature and rapid pulse, both with and without effusion, operation generally fails to arrest the active progress of the disease. Nevertheless the hopeless character under any other method of treatment, and the harmlessness of section under aseptic precautions, justifies, he believes, operation in every case, especially if there is effusion and diagnosis is not absolutely positive. Tubercular invasion of the fallopian tubes and ovaries from the intestinal tract he thinks is more common than is generally supposed. Thorough removal of the invaded structures is usually followed by permanent cure.

53.—See abstract in THE JOURNAL, xli, p. 1108.

Archives of Ophthalmology, New Rochelle, N. Y.

January.

54 *Report of 312 Cases of Cataract Extraction with a Small Peripheral Button-hole in the Iris. H. Beckles Chandler.
55 Delirium After Eye Operations. C. E. Finlay.
56 *Ruptures of the Iris. L. Weiss and W. Klingelhoeffer.
57 Sarcoma of the Orbit, Report of a Case Cured by the X-ray. L. Webster Fox.

54. **Cataract Extraction.**—Chandler has operated in over 300 cases on patients over 40 years of age in which he has removed a round piece, 1 mm. in diameter, as near to the root of the iris as possible. This allows drainage and the expressing of the cortical, which always accumulates above and under the iris. In washing out the anterior chamber the fluid used will flow backward through the opening, carrying with it the débris. In operating thus he tries to make his cut exactly in the corneo-scleral junction, expressing the lens in the usual manner, but not using force, after the lens is delivered, to keep the iris prolapsed, knowing that he can remove the cortical through the hole. The result is that he has had only three cases of loss of vitreous in 312 extractions and one of these occurred in endeavoring to remove an opaque capsule. The cause of prolapse he attributes to two factors. The most important one is a flabby iris, and the other is tardy closure of the wound. The use of eserin or pilocarpin to tone up the sphincter results in posterior synechiæ in a large percentage of cases, even when atropin is used. In making this small opening it is absolutely necessary to have a forceps the teeth of which are at the tip end, and scissors whose blades are very thin; otherwise it is made larger and further down than intended. He has usually made the opening after having extracted the lens, as it seems that the small amount of aqueous under the iris acted as a buffer and facilitated its extraction.

56. **Rupture of the Iris.**—Three cases are reported by Weiss and Klingelhoeffer, and they tabulate reported cases to ascertain, if possible, the mechanism of the injury. The trauma in the eye was in all cases violent, and where it was possible to tell the direction from which the blow came, the ruptures of the iris were on the opposite side from the place of impact. They criticise the various theories that have been offered, and

explain the laceration by the stretching of the sphincter most severely at the point perpendicular to the direction of the applied force and there ruptures occur. The elasticity of the sphincter must also play a part.

Carolina Medical Journal, Charlotte.
January.

58 *Lobar Pneumonia in the Mountain Sections. J. D. Roberts.
59 Bacteriology of Acute Lobar Pneumonia. J. Larkin Ballon.
60 How to Treat a Common Cold Successfully. C. R. Marshall.
61 Catarrhal Diseases of the Upper Air Passages. Clarence G. Clark.
62 Bronchial and Laryngeal Inflammation—Typical Features and Treatment. Uriel S. Boone.
63 Practical Dietetics in the Treatment of Pneumonia. T. J. Biggs.
64 Pneumonia. M. L. Smoot.

58. Pneumonia.—Roberts, who has practiced both in the lower country of North Carolina at an elevation of 200 or 300 feet above the sea, and also in the mountain region at from 3,000 to 4,000 feet elevation, finds certain differences in the type of pneumonia in the two sections. The pneumococcus is nearly always present in the mountain region and the cases occur mainly between December and April. He attributes much of the causation to the long cold winters and the impossibility of avoiding dampness. He has found it following influenza more than any other disorder, and has never seen it do so anywhere to such an extent as there. The alcohol complications of pneumonia are not so common, as the people are not generally habitual drinkers, and the epidemic feature is not pronounced. The most serious complications are those of the heart, which are very frequent, and the other complications, gastric and bowel troubles, are less troublesome than elsewhere. The mortality, he thinks, is not greater in the mountains than in the lower region. His own ratio in the Eastern part of the state was from 10 to 12 per cent. while in the mountains he thinks it will not exceed 1 in 8.

Virginia Medical Semi-Monthly, Richmond.
January 22.

65 *Therapeutic Value of Intravenous Injections of Collargol in Septic Affections. George T. Harrison.
66 Some Experiments and Conclusions in Hypnotic Therapeutics. W. H. Wallace.
67 Acute Lobar Pneumonia. W. B. St. John.
68 Treatment of Pneumonia. T. Jefferson Hughes.
69 Typical Case of Exophthalmic Goiter. William M. Lyne.
70 Aneurism of External Iliac—Spontaneous Cure by Sloughing. Southgate Leigh.

65. Collargol in Septic Affections.—Harrison's experience with collargol has confirmed the testimony of Credé, Schmidt and others, that given intravenously it is the best therapeutic measure for septic disorders. He uses a 5 per cent. solution and injects a hypodermic syringeful. He claims that it is entirely free from danger. The good effects usually appear in about six hours. He reports cases of pyemia and puerperal septicemia thus treated with the best results.

Vermont Medical Monthly, Burlington.
December 25.

71 Commitment and Treatment of the Insane. Walter D. Berry.
72 Some of the Cardinal Points in the Diagnosis of Abdominal Tumors. H. C. Crowell.
73 *The Temperature as a Guide to the Existence of Suppuration. Lyman Allen.

73. Temperature in Suppuration.—Allen notices the lack of relation between temperature conditions and suppurative processes. The latter, he finds, are often unattended by fever, even when acute, and the absence of fever must have little weight in the diagnosis of suppuration. Since a rise of temperature above 100 F. occurs in about two-thirds of all aseptic cases, the presence of fever alone is of little value in making a diagnosis of suppuration.

American Medical Compend, Toledo.
February.

74 *Observations on Alopecia Areata with a Report of Six Cases. Edward Melchers.
75 Milk as a Carrier of Disease. C. Longfellow.
76 "Persan," a Valuable Addition to Our Materia Medica. Charles D. Aaron.

74. Alopecia Areata.—Melchers describes cases and discusses the condition. He concludes that both the neurotic and parasitic disease are not conditions of the hair, but of the hair follicles and papillæ. The real parasite can be found only in sections of the scalp affected with progressive alopecia, and only by competent bacteriolgists. Most cases are parasitic, and ten or twenty local applications of trikresol will usually effect a cure. Creolin is equally good, but has the disadvantages of stickiness and staining qualities. In the neurotic variety, however, these remedies are of little use. Electricity and general and constitutional treatment are advised. He says the records show a great many cases of alopecia areata, especially in France, which can be traced to the hair brush and comb of the barber shop. He hopes to see a law passed compelling the barbers to disinfect their toilet utensils by formaldehyd gas. In conclusion, he quotes from Hyde as to the moral effect of alopecia on the individual and the need of the supporting assurances of the physician.

Canada Lancet, Toronto.
February.

77 Diseases Due to Organic Insufficiency. W. G. McCallum.
78 Leiomyoma. J. O. Todd.
79 *The Pretyphoid Fever State. Robert D. Rudolf.
80 Angina Pectoris. John Caven.
81 The Diagnosis and Treatment of Tuberculous Peritonitis. A. Groves.

79. Pretyphoid State.—The condition of general gastro-intestinal ill health that sometimes precedes typhoid is noticed by Rudolf. He has had in his experience a number of cases where typhoid fever set in, generally of a severe type, after such a preliminary. Several cases are reported. The possibilities are that the lowered state of health, especially the gastro-intestinal disturbance, predisposes to typhoid infection by lowering the general or local resisting power, or that the typhoid bacillus may be in the intestines for weeks setting up a certain amount of disturbance until, either on account of increased virulence or the lowered resistance of the host, true typhoid fever occurs. As regards the first of these possibilities, it is favored by the fact that gastro-intestinal disturbance predisposes to Asiatic cholera and dysentery, and it is not unlikely that it may also predispose to typhoid. It was noticed in the recent British campaign that the soldiers suffering from catarrhal bowel affections were the most prone to typhoid. The second possibility seems to him hardly as well supported by facts, though there are still some that favor it, such as the diarrhea that occurs during Asiatic cholera or during typhoid epidemics, which are not identifiable with the true disorder. He thinks, however, that the balance of evidence is in favor of the first proposition, that the condition of ill health lowers the resistance and favors invasion by the typhoid germ.

Northwestern Lancet, Minneapolis.
February 1.

82 Septic Endocarditis. L. A. Nippert.
83 Mastoid Abscess: Its Cause and Prevention. Frank C. Todd.

Pediatrics, New York.
December.

84 On Appetite Juice and the Ethics of Eating. J. G. Adami.

Albany Medical Annals.
February.

85 St. Peter's Hospital. Charles E. Davis.
86 Treatment of Diphtheria. Douglas C. Moriarta.
87 Report of Thirty Operative Cases of Appendicitis. Alvah H. Traver.

Kansas City Medical Index-Lancet.
February.

88 What of the Surgical Future? Daniel Morton.
89 Drinking Water, Examination of Same—Kansas City Supply. Jean R. Moechel.

Journal of Cutaneous Diseases, New York.
February.

90 Tuberous Iodid of Potash Eruption Simulating Histologically an Epithelioma. Douglass W. Montgomery.
91 Atypical Lesions in Ichthyosis. Mortimer A. Moses.
92 Case of Mycosis Fungoides Treated by the X-ray. Albert E. Carrier.
93 Case of Actinomycosis. H. J. F. Wallhauser.

Journal of Mental Pathology, New York.
Vol. v, Nos. 2-3.

94 Differential Diagnosis in Cases of Ideo-obsessional Constitution. Serge Soukhanoff.
95 Suggestion During Narcosis Produced by Some Halogenous Derivatives of Ethane and Methane (Ethyl-Methylic Suggestion). Paul Farez.
96 Abnormal Children in Italy. Dr. Manheimer-Gommès.

97 Suicidal and Homicidal Acts. Their Clinical Aspects and Medicolegal Significance. (Continued.) Louise G. Robinovitch.

Journal of the Michigan State Medical Society, Detroit.

February.

98 Relation of Surgical Pathology to Surgical Diagnosis. Joseph C. Bloodgood.
99 Essential Points of Distinction Between Cerebral and Mental Disease. Hiram A. Wright.
100 Standards of Milk Supplies in Detroit and Various Cities. Guy L. Kiefer.
101 Milk in Its Pathologic Relations. George Dufield.
102 Hot Springs, Arkansas, for Chronic Rheumatism. William F. Bernart.
103 Cause and Treatment of Morphin Inebriety. W. M. Donald.

Medical Times, New York.

February.

104 Life, and the Potentialities in Their Control Over Matter. E. C. Hebbard.
105 Interesting Features in Influenza. M. Shellenberg.
106 The Care of the Feet from a Medical Standpoint. H. Taylor.
107 Diagnosis, Causes and Treatment of Dysuria. G. R. Johnson.
108 Problems in Surgery. M. McCrory.

Medical Bulletin, Philadelphia.

February.

109 Vaccinia and Vaccination. John V. Shoemaker.
110 Internal Erethrotomy. Charles C. Miller.
111 Diphtheria. E. W. Mitchell.
112 Smallpox as Considered by the Ancient Arabian Physician, Rhases. Samuel H. Brown.

Journal of Medicine and Science, Portland, Me.

January.

113 Post-operative Hernia. F. L. Dixon.
114 Secretory Neuroses of the Stomach. Chauncey R. Burr.
115 Oculist vs. Optician. E. O. Chellis.

Washington Medical Annals, Washington, D. C.

January.

116 Notes on the Physiologic and Therapeutic Action of Radium. Truman Abbe.
117 Case of Osteomyelitis. J. Ford Thompson.
118 Case of "Flail" Joint: Result of Informal Operation on Elbow-joint for Rhot Injury. W. C. Borden.
119 Some Reminiscences of Postmortem Work. D. S. Lamb.
120 Diagnosis and Treatment of Appendicitis—with Tabulated Report of 98 Cases of Appendectomy. W. P. Carr.
121 Case of Fracture—Dislocation of the Spine. Laminectomy. Edward A. Bulloch.
122 Address. Medical Society of District of Columbia. George M. Kober.
123 Absence of Prolonged Nausea After Anesthesia by the Nitrous-oxid and Ether Method. Edwin M. Hasbrouck.
124 Treatment of Chronic Bronchitis. Thos. A. Claytor.
125 "Colds in the Head," Their Prevention and Cure. Walter A. Wells.
126 Report of a Case of Gunshot Wound. A. R. Shands.
127 Case of Appendicitis with the Appendix in the Sac of a Femoral Hernia. A. R. Shands.
128 Cholecystectomy for Results of Biliary Obstruction and Cholangitis. I. S. Stone.

Alabama Medical Journal, Birmingham.

January.

129 Treatment of Compound Fracture of Long Bones. W. H. Wilder.
130 Studies in Infant Feeding. S. W. Purifoy.
131 Some Frequently Unrecognized Symptoms of Eyestrain. S. Kirkpatrick.
132 Diagnosis and Treatment of Gallstones. Mack Rogers.
133 President's Address, Southern Medical College Association.

Medical Review of Reviews, New York.

January 25.

134 Cancer and Its Origin. (Continued.) Henry Morris.

Canadian Journal of Medicine and Surgery, Toronto.

February.

135 Internal Medication for Direct Remedial Effects. Geo. M. Aylesworth.
136 *Physiologic Generative Cycle of Woman. Jennie G. Drennan.

136—See abstract in THE JOURNAL, xli, p. 627.

International Journal of Surgery, New York.

February.

137 *Diagnosis and Operation for Gallstones. W. D. Haggard.
138 Post-operative Treatment. H. L. Stickney.
139 Radical Operation. A. R. Amos.
140 The Surgical Assistant. (Operations on the Bladder and Urethra.) Walter M. Brickner.

137.—See abstract in THE JOURNAL, xli, p. 1106.

Medical Standard, Chicago.

February.

141 A Surgical Clinic (Hypertrophy of Prostate, etc.). N. Senn.
142 Examination of the Rectum. Charles J. Drueck.
143 Antisepsis in Typhoid Fever. L. F. Schmauss.
144 Removal of Calculus from the Pelvic Ureter per Vaginam. Byron Robinson.
145 Growing Importance of the Bubonic Plague. J. Howe Adams.
146 Defective Speech. James M. Brown.

Northwest Medicine, Seattle, Wash.

January.

147 Injuries to the Lower End of the Humerus in Childhood—A Study of the Conditions Existing Five Years After the Accident. Charles L. Scudder.
148 Pulmonary Embolism. R. E. Walker.
149 Septic Synovitis. Alfred Raymond.
150 Study of Practical Anatomy with that of Medicine and Surgery. Joseph Gibbs.

Fort Wayne Medical Journal-Magazine.

December.

151 On the Limitation of Drug Medication. Charles W. Frink.
152 Report on the Results of the Use of the Elastic Ligature (McGraw) in Twelve Cases of Gastroenterostomy. Charles B. Nancrede.

Medical Examiner and Practitioner, New York.

January.

153 Tuberculosis and Life Insurance. Thomas G. Allen.
154 Occupation in Relation to Longevity. John M. French.
155 Medical Examinations for Life Insurance in Large Cities. L. Brackett Bishop.
156 Centrifuge Technic. William H. E. Wehner.
157 A Few Practical Points on Urinary Analysis. Joseph D. Nagel.
158 Special Qualifications of a Physician as a Life Insurance Examiner. J. D. Pratt.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Semaine Médicale, Paris.

1 (XXIV, No. 3.) *Des indications thérapeutiques dans la cholelithiase infectée. A. Chauffard.
2 L'hypotension arterielle chronique. A. Ferrannini. Abstract.
3 (No. 4.) *La coloration vitale des tissus et des bactéries pour augmenter la pénétration et favoriser l'action curative des rayons X. R. Odier (Geneva).
4 Sigmoidite et perisigmoidite. F. Lejars.
5 Texte de la nouvelle Convention Sanitaire Internationelle portant règlement pour prévenir l'invasion et la propagation de la peste et du choléra. (Commenced in No. 3.)

1. Medical Treatment of Infectious Cholelithiasis.—Chauffard believes in operating on such cases as the routine procedure, but some are occasionally encountered in which operation is contraindicated or temporizing is allowable. He dislikes to operate, for instance, on women between 50 and 60 who are chronically addicted to lithiasis, obese, the abdomen fat and flabby, the myocardium soft and hypotonic, with generally a tendency to varicose veins and a little sugar or albumin in the urine. The organism has little resistance and the abdomen is a bad one for surgical intervention, while such patients can be cured by medical treatment. He describes other types of moderate intensity in which medical treatment should be tried first, guided by the type of the fever, intermittent, remittent or continuous, by the type of the leucocytosis, the curve generally paralleling that of the temperature, by the retention of bile and the local signs indicating a tendency toward suppuration which forces the surgeon's hand. He argues that an infectious gallstone affection is comparatively free from the dangers surrounding an appendicitic one. It does not develop so insidiously, and the evolution toward suppuration can be detected. A still further difference between the two is that there is no effective medical treatment for appendicitis, while that for infectious cholelithiasis is very promising. It consists in the application of ice to the gall-bladder region or hot compresses if the ice is not tolerated. The first indication is to put the patient on an exclusive milk diet or in severe cases allow nothing but water for twenty-four to forty-eight hours. Diuretic teas may be used to advantage. The biliary passages are then to be sterilized by salicylic medication, for which he prefers sodium salicylate associated with salol and betol (naphthol salicylate). He gives three doses in the twenty-four hours of a combination of the three in equal parts, 1 gm. each. When the infectious symptoms have subsided he returns to the systematic preventive medication with which he keeps his patients free from recurring liver colic. He accomplishes this with small doses of sodium salicylate associated with sodium benzoate or Carlsbad salts, and "Harlem oil."

3. Staining Tissues and Bacteria to Increase Effect of Chemical Rays.—Odier has become convinced that the chemical rays

penetrate into and affect living tissues and bacteria in a different degree according to their color. The blood protects the tissues from their action and has to be expelled from the part before light treatment is effectual—this is not due to the composition of the blood but to its red color. If the blood were blue the tissues would be unprotected and the light rays would have intense penetrating power. He has found from his research that a combination of 1 per cent. methylene blue, gentian violet and thionin stains electively the protoplasm, nuclei and chromatin of living cells. They take up the stain better when a small percentage of cocain is added as it renders the cells more tolerant of the stains. He also heats the liquid always to 35 or 38 C. Tests of the chemical rays directed on tissues thus previously stained show that their penetrating power is immeasurably enhanced. Photographic plates are affected in twenty seconds through the abdominal wall of dogs and in one minute through the skull of a cat. [The principle seems to be similar to that recently promulgated by Dreyer and mentioned editorially in THE JOURNAL of February 13.—ED.] Odier has applied these premises in therapeutics, and reports 3 cases of erysipelas and several of furunculosis treated according to them. The results were so striking that before waiting for further confirmation he thinks he is justified in calling the attention of the profession to them. He cured the erysipelas by painting the lesions with a mixture of gentian violet and methylene blue (the true methylene blue, a tetramethylated chlorid of thionin), exposing them afterward for fifteen to twenty minutes to the light of an arc lamp. A large furuncle on the back of a dog was cured by three exposures for thirty minutes to the arc light after injecting into the lesion .5 c.c. of warm artificial serum containing 1 per cent. methylene blue and the same amount of cocain. Furuncles on the back of the neck rapidly healed when painted with a mixture of gentian violet and methylene blue, and then exposed to ordinary daylight. He describes his method of expelling the blood from the part to be treated, with one or two ligatures or by compression with a metal ring or rings. Addition of even a small amount of methylene blue to a culture of the diphtheria or tubercle bacilli or certain kinds of streptococci, augments the bactericidal power of the light to a marked degree.

Archiv f. Verdauungs-Krankheiten (Boas'), Berlin.

Last indexed page 82.

6 (IX, No. 6.) *Is the Evacuation of the Stomach Dependent on the Amount of Acid Produced? E. Meyer.—Ist die Entleerung des Magens abhängig von dem Grad der Säurebildung?

7 *Absorption of Iodin and Value of Penzoldt-Faber Test of Gastric Motor Function. K. Inouye.—Ueber die Resorption von Iod und die Brauchbarkeit der P.-F.'schen Probe zur Bestimmung der Motilität des Magens.

8 *Splashing Sound in Digestive Tract. Gockel.—Zur Kenntnis des Plätschergeräusches für die Diagnose von Stenosen im Magen-Darm-Traktus und der sogen. perkussorischen Transsonans.

9 *Zur Frage der quantitativen Pepsin-Bestimmung nach Metts (Modifikation Nirenstein-Schiff). J. Kaufmann (New York).

10 Ueber Kompressions-Stenose des Oesophagus, verursacht durch ein Aneurysma der Aorta descendens. W. Plitek.

11 Bemerkungen zu: van Spanje, Das Manometer bei der Capacitäts-Bestimmung des Magens (of stomach). G. Kelling.

6. Emptying of Stomach in Relation to Acid Formation.—Meyer had occasion to study a number of healthy subjects on whom lavage of the stomach was systematically performed for other purposes. He could not detect any connection between the emptying of the stomach and the normal, subnormal or hypernormal secretion of acid.

7. Absorption of Iodin from the Stomach.—Inouye's experimental tests showed that iodin may be absorbed from the stomach in dogs and cats, but not in man, rabbits or guinea-pigs. The iodin reaction appearing in the saliva indicates that the stomach content has been passed far along into the small intestine in man. In rabbits the reaction could be obtained in five minutes at a distance of 40 to 60 cm. in the small intestine, before it could be detected in the saliva. The results of the tests in rabbits coincided with those observed in man. The iodin reaction is retarded in both when the stomach contains food. As a whole the findings indicate that potassium iodid passes rapidly along into the intestines in normal conditions, and consequently the Penzoldt-Faber test—the time of the first appearance of the iodin reaction in the saliva—may be regarded as a valuable indication of the gastric motor functioning. The iodin salts are gradually decomposed by hydrochloric acid, but the proportion in the normal gastric juice is too small to produce any appreciable effect in less than an hour.

8. Diagnostic Significance of Splashing Sound.—Gockel relates the particulars of 7 cases of cancer of the stomach in which the diagnosis was suggested by a splashing sound at the first examination (the stomach not empty), and only perceptible with the stethoscope. Other symptoms of a cancer were lacking in some. The discovery of the splashing sound was a warning to repeat the examination several times, on the fasting stomach. In one case this symptom, with stagnation, lack of HCl, lactic acid after oatmeal gruel taken after thorough lavage of the stomach, compelled the diagnosis of cancer of the stomach. The patient refused the advised operative intervention. A palpable tumor did not develop until six and a half months later, when the operation revealed an extensive carcinoma at the pylorus with numerous metastases in the glands. In 2 other cases, after evacuation of the stomach and palpating with the patient reclining first on one side and then on the other, the presence of a tumor was discovered in addition to the stagnation and splashing sound. By this change of position it may be possible to palpate a tumor, which in the dorsal decubitus and in narcosis is inaccessible to palpation. In another case the presence of the splashing sound, the stomach fasting, with other symptoms, enabled the diagnosis of a stagnation insufficiency of the intestine to be established and the carcinomatous stenosis to be located at the ileocecal valve. Another case simulated spastic obstipation, but the stenosis near the cecum was finally differentiated by the absence of colic suggesting appendicitis, and the few or no disturbances accompanying the daily stools, while retention of stools induced pains in the lower half of the abdomen, with occasional vomiting. Further evidence of stenosis was afforded by the alternate softness and distension of the abdomen, the discovery once of a rigid loop in the ileocecal region, and the splashing sound, the stomach fasting, after ineffectual "expression" of the stomach. The assumption of a circular carcinoma in this case was based on the age of the patient—54—the absence of any symptoms of inflammation at the time or previously, and the lack of any palpable tumor. He emphasizes the importance of the splashing sound for those cases in which there are no other symptoms indicating stagnation in the gastro-intestinal tract. Its discovery once should compel further and repeated investigation, the stomach empty. If the splashing sound be constantly present, the stomach empty, stenosis of the stomach may be excluded, and the diagnosis of stagnation insufficiency in the intestines be assumed as probable or certain. If the splashing sound can not be detected by succussion, palpato-percussion or change of posture, auscultation of the abdomen with the stethoscope is still liable to reveal it. When detected it should suggest the possibility always of stagnation insufficiency of a malignant or benign nature in the gastro-intestinal canal. The typical sound resembles that made by shaking a bladder or bottle half filled with air and half with fluid. In his cases described, some of which had been long under observation, the first appearance of the splashing sound after a period of obscure symptoms which had suggested the diagnosis of stenosis, was the first positive sign that justified operative intervention. The location of the sound was the guide to the seat of the lesion in some cases.

9. Mette's Quantitative Pepsin Test.—Kaufmann tabulates the particulars of 72 cases of various affections in which comparative tests of the pepsin were made by the modified Mette test and the biuret test. He thinks that the values expressed in figures are much more convenient for purposes of comparison than the tints of the biuret test. The values found with both tests ran exactly parallel.

Berliner klinische Wochenschrift.

12 (XLI, No. 1.) *Actinomycose oder Osteomyelitis? E. von Bergmann.

13 Formation of Sugar from Albumin in Diabetes. F. Kraus.—Ueber die Frage der Zuckerbildung aus Eiweiss im diabetischen Organismus.

14 *Therapeutische Beobachtungen. J. Sigel.
15 (No. 2.) Effects of Drinking 25 c.c. of Hydrochloric Acid. H. Strauss.—Ueber röhrenförmige Ausstossung der Spitzer-Shrenschleimhaut und stenosirende Pylorus-Hypertrophie nach Salzsäurevergiftung.
16 *Outlining the Heart. F. Rosenfeld.—Ueber die Methoden zur Grossbestimmung des Herzens.
17 Ueber primäre Darm- oder Gaumen-Tuberculose (of intestines or palate). S. Ito. Two cases of each.
18 *Painful Knee Affections. A. Hoffa (Berlin).—Zur Pathologie und Therapie der Kniegelenkserkrankungen. (Commenced in No. 1.)
19 (No. 3.) Experimentell-Untersuchungen über die innerlichen Darreichung eines Tubercular-Antitoxins. F. Figari (Genoa).
20 *Gout. Falkenstein.—Ueber das Wesen der Gicht und ihre Behandlung.
21 Dystrophia musculoris progressiva bei Mutter und Kind (in mother and child). M. Bresch (Berlin).
22 (No. 4.) Ueber aktive Immunisirung von Menschen gegen den Typhus-Bacillus. K. Shiga.
23 *Syphilis und Tabes. W. Erb (Heidelberg). (Commenced in No. 1.)
24 *Zur Aetiologie und Therapie der Tabes, speciell ihr Verhältniss zur Syphilis. F. Lesser (Berlin).
25 *Bullet Wounds of Pancreas. M. Borchardt (Berlin).—Schusverletzung des Pankreas und acute hämorrhagische Pankreatitis. (Commenced in No. 3.)
26 *Origin of Tuberculosis in Man and Animals. E. von Behring.—Leitsätze betreffend die Phthisiogenese beim Menschen und bei Thieren.

12. **Actinomycosis or Osteomyelitis?**—Bergmann describes the case of a robust man of 29 who had been kicked in the knee by a horse five years before. The gaping wound did not heal, and the bottom showed at first a dirty greenish-yellow tint. Under bichlorid dressings the wound healed, but a swelling in the parts persisted, and numbness at first was followed by pains. He was treated on the assumption of osteomyelitis for a year or two, until Bergmann noticed that the affection had commenced after the usual age limit for osteomyelitis had been passed; also its gradual, chronic course, the relative good health otherwise of the patient for four years, and the afebrile development of redness of the skin and fluctuation in the swelling in the fifth year. He then diagnosed actinomycosis, and soon cured the patient by appropriate excision and curetting. Staphylococci were found with actinomyces in the lesion, and the former were probably responsible for the enlargement of the inguinal lymphatics observed at the time and spontaneously subsiding after removal of the focus below.

14. **Therapeutic Notes.**—Sigel publishes the results of years of careful tests and experiences with various new therapeutic preparations.

16. **Outlining the Heart.**—Rosenfeld has been studying the various methods in vogue for determining the outlines of the heart. His research was conducted at von Leyden's clinic and on the cadaver outside. He thinks Smith's method is liable to induce error. The technic which he regards as most reliable is light finger percussion, radiating from the area of greatest dullness in all diameters. The absolute limits are then determined by percussion, noting the sensation of resistance to the touch, percussion proceeding likewise in this case from the center of dullness to each side. Better results are obtained thus than by commencing where the dullness is less marked. Normally, the right limit of the heart extends about 1 cm. beyond the right margin of the sternum, but this may vary by .5 to 1 cm. On the left, the heart limit is about .5 cm. inside the nipple line. For this palpatory percussion he prefers the old Skoda hammer or the Seitz and Struck plessimeter (4.5 cm. by 1.5 cm.), which is more reliable than the flat plessimeters. He places the third phalanx of the extended finger on the head of the hammer and percusses thus, or the finger can be used instead of the plessimeter. The sensation of resistance thus obtained enables the outlines of the heart to be determined with surprising accuracy. The findings are not confused by the heart sounds, etc., as by other technics.

18. **Treatment of Puzzling Knee Affections.**—The cases to which Hoffa refers are those which have hitherto been classed as neuralgia of the knee. He has found that in many cases the apparent neuralgia is due to atrophy of the quadriceps, to internal derangement of the joint or to a lipoma or free body in it. Treatment depends on correct differentiation, and the results are most gratifying. The quadriceps exerts traction on the capsule, and if this muscle is atrophied the capsule lies loose, and is liable to get between the patella and the condyle of the femur or between the condyles of the tibia and femur. This pressure on the capsule causes the pain, but six weeks of treatment by massage and exercises of the atrophied quadriceps will completely cure the trouble. Treatment addressed to the joint itself, immobilization, baths, etc., only fosters the evil by increasing the atrophy of the muscle. The second cause of the so-called knee neuralgia is the laceration or displacement of a meniscus, or of both, from rupture of the attaching ligaments. The most frequent form is the detachment of the anterior insertion of the internal meniscus from the tibia. The trauma causing the rupture may have been trivial, but the joint swells afterward and is painful; the subject walks on the toes of the foot. Under repose, compresses and massage, the soft, elastic swelling subsides, and the joint returns apparently to normal. Now and then, however, sudden attacks of pain and interference with walking are noted after climbing stairs or other quick movement. The pain is sometimes sudden and intense. The joint appears normal on inspection, but palpation of the space between the condyles of the femur and of the tibia is extremely painful. Local sensitiveness at this point is characteristic and differentiates the trouble, although the displaced meniscus may sometimes also be palpated when the knee is stretched, disappearing again as it is flexed. In recent cases it may be possible to reduce the displaced meniscus, but if conservative treatment is not effectual, it should either be sutured in its place or removed by a "fingerless" operation. The third form of these affections is the presence of an inflammatory fibrous hyperplasia of the fat tissue normally to be found under and on both sides of the patellar ligament. This excess of fat tissue gets caught between the working parts of the joint and causes intense pain. The joint is swollen, and below and on both sides of the patella there is a pseudo-fluctuating doughy swelling lifting up the patellar ligament. The proliferating masses should be removed after failure of conservative measures. Sometimes two or more of the above causes combine to make trouble. Patients belonging to these categories frequently go for years from one physician and watering place to another, while a prompt cure may be realised by the interventions described.

20. **Essence and Treatment of Gout.**—Falkenstein presents arguments to sustain the view that gout originates in the stomach, and is primarily due to some disturbance in the gastric glands which secrete hydrochloric acid. He is a victim himself, and states that for more than two years he has been taking daily, without intermission, forty to sixty drops of pure hydrochloric acid, that is, 3 to 5 gm., in a glass or two of carbonated water. His dyspepsia has completely subsided, and the old attacks of gout have never returned, only an occasional mild pain reminding him of the existence of his gout which had previously tormented him for twenty-three years. His personal experience has been corroborated by that of a large number of patients treated in the same way. He cites a number of facts published of late years which support this theory, and explains the rarity of gout in children and in warm climates by the simpler food, the constant exercise of children and elimination by perspiration in the tropics. He thinks that colchicin is harmful, as it arrests the commencing dissolving process and restores the *status quo ante*, thus aborting an existing attack, but providing aggravated conditions for the following ones. Alkalines are also distinctly injurious, he believes.

23. **Syphilis and Tabes.**—When the connection between syphilis and tabes was first suggested, Erb was skeptical, but he has been industriously collecting statistics since, and now announces that the percentage in his latest series of 400 cases proves to be the same as in the earlier ones. These statistics include only educated men above the middle class, as he considers this material the only one reliable for such studies. Out of a total of 1100 cases of tabes, he found 89.45 per cent. with an unmistakable history of syphilis or

chancre, and in the remainder, syphilitic antecedents were probable in all but 2.8 per cent. He thinks that in this small minority, although the syphilitic origin is non-proven, yet that it is in the highest degree probable. His extensive article analyzes his experience with venereal disease in general. He has made a practice of examining for venereal disease all his male patients over 25, and has found that out of 600 educated men of the upper classes, 43.3 per cent. were absolutely free from venereal disease of any kind. Only 50 per cent. of the 600 had had gonorrhea. He found among 50 tabetic subjects that 90 per cent. had had gonorrhea, including 5 with no manifest evidences of other venereal disease. In conclusion, he critically reviews the various publications on the subject of syphilis and tabes in the last few years. The rarity of tabes in uncivilized countries may be due to its non-recognition. The question is to decide what factors intervene in these places to prevent the development of tabes from syphilis. No land has yet been found where tabes prevails and syphilis is unknown. In regard to treatment, his experience includes multitudes of cases of tabes practically cured by energetic specific treatment with Hg and Iodin, but in a large number of others the progress of the tabes was not arrested by treatment.

24. Etiology and Treatment of Tabes.—Lesser pleads for more careful postmortem examination of tabetics. He classifies the lesions of syphilis as papulous or secondary; gummatous or tertiary; interstitial or quartan. The third phase is frequently skipped. He regards tabes as primarily an interstitial process with secondary ascending degeneration of the nerve fibers, the whole to be classed as one of the quartan manifestations of syphilis. The papulous stage responds to mercury; the gummatous stage to iodin, but the interstitial stage is refractory to both these drugs. In 96 cases of tabes, he found an aneurism eighteen times, and cites this fact as the keystone of his argument. It establishes a parallel between the syphilitic interstitial inflammation leading to aneurism and the same process in another organ entailing tabes, both quartan manifestations of syphilis, and both most liable to develop in subjects who have not presented tertiary manifestations. Tabes is most rare in countries where the tertiary manifestations are most common and severe.

25. Bullet Wounds of Pancreas.—Borchardt's patient was dismissed cured thirteen weeks after a bullet wound of the tail of the pancreas with alarming hemorrhage from the lacerated splenic vessels. Fourteen other bullet wounds of the pancreas are on record, with only 4 recoveries. His is the only case of recovery after injury of the splenic vessels. He mentions that he always makes a practice of examining the pancreas whenever the abdominal cavity is opened on account of a bullet wound. He cites the tragic fate of President McKinley as an illustration of the ease with which such an injury may be overlooked. Wounds in the pancreas tissue bleed very little, and the hemorrhage can be readily arrested with tampons. Bleeding from the injured vessels of the hepatogastric ligament is alarming, but can soon be controlled by a few ligatures. In case of a bleeding wound in the liver, he has found it possible to arrest the hemorrhage by pressing iodoform gauze on the bleeding surfaces, fastening it with a few deep stitches. In order to prevent the escape of pancreatic juice into the abdominal cavity, he thinks it is necessary to wall off the organ with tampons to promote formation of adhesions and divert harmful secretions outward. Suture of the wound alone is unreliable. In regard to acute hemorrhagic (not infectious) pancreatitis, he comments on its liability to recurrence. In case the general condition allows an operation, he would tampon the bursa omentalis through the gastrocolic ligament and introduce a second protecting tampon behind the omentum, colon and stomach, making an artificial anus in case of paralysis of the intestines. Intervention on the pancreas itself in the acute stage has always been followed by the death of the patient. The particulars of the 15 cases are appended.

26. Origin and Prevention of Tuberculosis.—Behring's new views on this subject were summarized in THE JOURNAL on page 904 of the last volume. He here recapitulates them in forty propositions. The campaign against tuberculosis based on these principles should aim to prevent ingestion of tubercle bacilli with the food, especially during early infancy, and at the same time supply tubercle-bacillus antibodies in the milk for the purpose of rendering harmless any tubercle bacilli that may be inhaled. The production of milk absolutely free from these bacilli will be possible if the immunization of cattle, according to the method he has devised, realizes present anticipations. To complete the immunizing treatment of infants with the antibodies, it may be possible to add to those already in the milk others derived from outside sources.

Centralblatt f. Bakteriologie, Etc.

Last indexed page 884.

27 (XXXIV, No. 3.) Relations of Lactic Acid Bacteria to Streptococcus Lanceolatus. Kruse.—Das Verhältniss der Milchsäurebakterien zum Strep. lanc. (Pneumococcus, Micrococcus, etc.)

28 Adaptation of Bacteria to the Defensive Powers of the Infected Organism. F. Ehrenberg (Cracow).—Ueber die Anpassung der Bakterien an die Abwehrkräfte des inficirten Organismus. 1. Pyocyaneus-Infektion, nebst Bemerkungen über die Serodiagnostik dieser Infektion; 2. Unempfindlichkeit der aus dem Organismus gezüchteten Typhus-Bacillen gegenüber der bakteriziden Wirkung menschlichen Serums.

29 *Intracellular Constituents of the Typhoid Bacillus. A. Macfadyan and S. Rowland. (Concluded.)

30 "Zum Streit um den Meningococcus." H. Albrecht and A. Ghon.

31 *The Turtle Bacillus. Its Cultivation, Biology and Pathogenicity. F. F. Friedmann.—Der Schildkrötenbacillus, seine Züchtung, Biologie und Pathogenität. (Concluded.)

32 Die Trypanosomen in der Menschen- und Tsetse-Pathologie, sowie vergleichende Trypanosomen-Untersuchungen. L. Rabinowitsch and W. Kempner.

33 Two Distomes from Canadian Urodela; 1, Monocaecum cornutum, and 2, Brachycoelium hospitale. J. Stafford (Montreal).

34 Inhibiting Action of Glycogen on Hemolytic Processes. Wendelstadt.—Ueber die Einwirkung von Glykogen auf hämolytische Vorgänge.

35 Ueber die Bindung des Bakterie-Hämolysins an die rothen Blutkörperchen (red corpuscles). R. Volk.

36 *Zur Lehre von den antitoxischen Sera. P. Wechsberg (Vienna).

29. Intracellular Constituents of Typhoid Bacillus.—Macfadyan states that inoculation of animals with disintegrated bacilli is not accompanied by the usual local reaction, while absorption proceeds more rapidly. He has succeeded in producing an antityphoid serum which has both bactericidal and antitoxic power. His technic includes freezing the microorganisms to brittleness with liquid air and then grinding them. The apparatus is described with cuts. Experiments with his serum are now being conducted on the horse.

31. Cultivation and Biology of the Turtle Bacillus.—The tubercle bacillus derived from a turtle has proved very effective in Friedmann's hands as a means of immunization against human and bovine tuberculosis. His interesting results were reviewed in THE JOURNAL recently, page 136. He describes experiments with it here inoculated into other cold-blooded animals. It invariably induced a rapidly fatal tuberculosis in them, but in mammals it behaved differently.

36. Antitoxic Serums.—Wechsberg describes the aim of serum therapy as the production of serums as polyvalent as possible, for use against the various partial toxins of the disease germs. He warns that the results of tests on animals can not always be applied to man without reserve.

Centralblatt f. Chirurgie, Leipsic.

Last indexed page 124.

37 (XXX, No. 50.) *Treatment of Granulating Skin Wounds. H. Wagner (Breslau).—Behandlung von granulierenden Hautwunden.

38 (No. 51.) Die Versorgung des Appendix-Stumpfes. Riedel (Jena).

39 (No. 52.) *Adjustable Constricting Bandage. S. Spiegel.—Zur Technik der künstlichen Blutleere. Eine regulierbare Konstriktions-Binde.

40 (XXXI, No. 1.) *Zur intrakapsulären Prostata-Resektion bei Prostata-Hypertrophie. L. Rydygier.

41 *Behandlung der Humerus-Frakturen im Schwebestreckverband (Aequilibrior-Methode). Geissler.

42 (No. 2.) *Zur Therapie der kongenitalen Hüftverrenkung (dislocation of the hip joint). M. Reiner (Lorenz's clinic).

43 *Permeability of the Sutured Vas Deferens. H. Vuillet (Lausanne).—Ueber die Durchgängigkeit des nach Sektion oder Resektion genähten Vas deferens.

44 (No. 3.) *Zur Frage der Catgut-Sterilisation. Salkindsohn (Wilna).

45 *Zur Drainage des Herzbeutels (of pericardium). W. Mintz (Moscow).

46 Zur Paraffin-Nasen-Plastik. H. Eckstein (Berlin).

47 (No. 4.) Technische Beitrage zur Chirurgie der Bauchhöhle (of abdominal cavity). G. Kelling (Dresden).
48 Zur Technik der Resectio appendicis. A. Beis (Kharkov).

37. Open Treatment of Granulating Wounds.—Wagner wearied of the tedious healing of granulating wounds, especially when the pyocyaneus was once installed in them. He found that patients in private practice shrink from grafting operations. For these reasons he sought for a better method of treating surface wounds after granulation was once established than the usual interminable salve treatment. He thinks the application of salves induces secretions which in turn provide a fine nest for microbes. For several years he has been treating such wounds by leaving them open to the air when the surface was covered with healthy granulations. The secretion at once diminishes, the granulations shrivel under the influence of the air, and a pellicle soon forms over the surface. If there are microbes under this pellicle retention follows, but the drying up of the wound evidently is unfavorable to the proliferation of germs. When the surroundings of the wound are healthy a granulating wound as large as the palm of the hand has frequently healed over in eight or ten days under exposure to the air. In old leg ulcers healing is less rapid, but is still very satisfactory. He has frequently treated patients who presented two or more wounds, by exposing one to the air and applying salves to the other. In every instance the superiority of the former method was unmistakably apparent. The open treatment is peculiarly effective for wounds in which grafting has been applied without much success. The unhealed flaps should be removed, and then the epidermis soon spreads from the transplanted scraps until the entire surface is covered. He thinks that the air exerts a certain stimulus on the epithelium similar to that from ether spraying. The granulations as they shrivel become flatter, which also favors the growth of epidermis. The danger of infection from the air is not so great as was formerly assumed, and granulating surfaces are particularly resistant. In years of experience he has never known a single instance of harm done by infection in these cases. Of course, he is careful not to attempt this open treatment in close contact with erysipelas or other severe infection. Its special field is in home and private practice.

39. Adjustable Constricting Bandage.—Spiegel's instrument is a silk webbing to form the bandage. One end terminates in a slide catch its entire width. The other end of the webbing after passing around the limb is wound on a roller projecting horizontally above the clasp device. A thumb-screw turns the roller and tightens the band as desired, after it has been clasped around the limb. It has been found a great improvement over the ordinary constricting bandage in 80 operations at Mosetig's clinic. Two cuts are given to show the simple details of the apparatus.

40. Intracapsular Resection of the Prostate.—In order to proceed as cautiously and with as little traumatism as possible, Rydygier makes his incision along the raphe from the root of the scrotum to near the anus, but incises the capsule 1 to 2 cm. from the median line to avoid injury of the urethra. He carefully refrains from opening into the urethra or bladder, and proceeds to intracapsular resection. The whole intervention is thus comparatively inoffensive, and if there should be recurrence of trouble, the operation could be easily repeated. He urges early intervention, before the evil results of retention have been established.

41. Balancing Suspension Treatment of Fractures of the Humerus.—Geissler illustrates an apparatus with which he cured a supracondylar fracture of the humerus in a boy of 7 with perfect functional results. The arm was flexed and placed in a plaster cast extending from the fingers to the upper third of the upper arm. The arm was then raised by a rope, pulley and weight, the suspension being applied a little below the elbow. The cast thus formed a right angle and the weight of the forearm just balanced the traction of the body on the upper arm. In order to make this balance perfect a weight was fastened on the cast over the hand. The elbow was thus freed from all traction. The wide band by which the arm was suspended was of adhesive plaster and passed first around the elbow before the ends were united to form the sling. The plaster cast spread the traction over the entire surface of the arm within, while the elbow was free. The bag of sand which he used for the suspension weight weighed about 6 pounds.

42. Treatment of Congenital Dislocation of the Hip-Joint.—Reiner has found that Schlesinger's two-time maneuver has enlarged the age limits within which bloodless reduction of the dislocation is still possible. He has thus treated 10 cases, and the results have been extremely satisfactory, although the subjects were from 10 to 15 years old, and in 2 the displacement was bilateral. The maneuver only aims to prepare the parts for the operation proper. It consists in forcing the leg into the position where the head slips most readily into its proper place, and applying a plaster cast without attempting to force the head into place. The intervention is then completed as usual, after an interval of one or two weeks. He explains the mechanism as follows: The fixation in the position secured by the first maneuver presses the head against the isthmus in such a way that it gradually stretches the muscles, and thus is removed the greatest obstacle to the final reposition of the head when the intervention is completed. Certain features of the after-treatment are important. The main point is to retain the contracture attained, leaving it to correct itself spontaneously. The active and passive exercises during the day are replaced at night by restoring the joint to the primary position. This is accomplished by a plaster bed made by molding the plaster over the child as he lies on his belly, the cast thus made including the pelvis and reaching to the top of the thorax, holding the thigh abducted at a right angle, with or without extension by means of a pad under the knee. The possibility of reproducing this primary position with ease is the best test of the perfection of the reposition. No joint can be considered faultlessly replaced which although it may allow the reproduction of the primary position yet assumes at the same time slight flexion.

43. Permeability of Vas Deferens After Suture.—Vulliet presents an illustration of a vas deferens in a dog sutured after resection. The cut shows the complete permeability of the vas, the epithelial lining apparently normal. He obtained this result in 3 out of 4 dogs treated by section or resection and suture of the vas deferens. The lumen is very small, but the walls are comparatively thick and allow a suture to be taken without penetrating into the lumen. He is confident that the probabilities in favor of the retained permeability of the vas in man are still more promising.

44. Sterilization of Catgut.—Salkindsohn remarks that catgut sterilized by Bloch's method of soaking it in a solution of 1 part iodin and 10 parts potassium iodid in 100 parts water, loses its firmness in time. Otherwise it complies with all the requirements for a perfect suture material. He thinks that this one remaining objection can be obviated by using a solution of 1 part tincture of iodin in 15 parts spirit. vini (80 per cent). This is equivalent to 2/3 per cent. iodin puri in 50 per cent. spirit. vini. The catgut is placed in this solution for a week, after which it is ready for use and can be kept indefinitely in the fluid. Thus prepared it has all the good qualities of iodized catgut, while it has the superior advantage of being durable. Catgut thus prepared a year ago is still as perfect as when first made, and he has used it for ligatures, sutures, herniotomies, etc., without finding that its age had detracted in the least from its fine qualities.

45. Drainage of Pericardium.—Mintz recently cured a case of suppurative pericarditis by establishing free drainage. He reached the pericardium through an incision about 7 cm. long along the lower margin of the seventh costal cartilage. The pericardium was incised over a sound inserted through an opening above, the fifth rib having been previously resected in a vain attempt to evacuate the pus. Since then he has been testing the procedure on cadavers of subjects from 9 to 70 years of age, and found that it was possible in every case to open the pericardium without injury to the pleura or peritoneum. The abdominal muscles are detached from the

rear of the left, seventh costal cartilage, reached through an oblique incision along the lower margin of the cartilage. The latter is then divided at the top and bottom of the incision, and turned back out of the way with its soft parts, including the attachment of the diaphragm. The pericardium then becomes apparent in the upper end of the wound and can be readily opened. In his experiments on the cadaver, pericardial fluid always poured out when it was incised, which demonstrates that even a small amount of exudation can be easily drained away by this technic.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

49 (XXX, No. 4.) *Effect of Mountain and Sea Climate on Man. A. Loewy (Berlin).—Die Wirkung des Höhen- und Seeklimas auf den Menschen.
50 *Bemerkungen zur Paranoia-Frage. R. Schultze. (Commenced in No. 3.)
51 *Fall von Staphylokokken-Sepsis. O. Niedner.
52 Ueber congenitale Cysten-Nieren (cystic kidneys). O. Busse.
53 Ophthalmia neonatorum und der Gonokokkus. T. Arnsfeld.
54 *Treatment and Prevention of Hay Fever. R. Mohr (Mögula bei Pirna).—Zur Behandlung bezw. Verhütung des Heufiebers.
55 Ueber Sugoformum solubile. M. Joseph.
56 *Development of Surgery During the Nineteenth Century and Its Relation to the Medical Curriculum. V. Czerny (Heidelberg).—Ueber die Entwicklung der Chirurgie, etc.
57 Tribute to A. Weismann on His Seventieth Birthday.
58 In Memoriam. F. Jolly.
59 (No. 5.) *Die Ubiquität der Tuberkel-Bacillen und die Disposition zur Phthise. C. Flügge.
60 *Zur Frage der aktiven Immunisierung gegen Tuberkulose. F. F. Friedmann (Berlin).
61 Die Prognose der progressiven Paralyse. R. Gaupp (Heidelberg). (Commenced in No. 4.)
62 *Podophyllin bei der Behandlung Ankylostomiasis. Neumann.
63 Ueber den gegenwärtigen Stand der Lehre von der Eklampsie gravidarum. Seydel. General review. (Commenced in No. 4.)
64 Tribute to E. Neumann on His Seventieth Birthday.

49. **Mountain and Sea Climate.**—Loewy has been conducting comparative research on the effect of mountain and sea climate. He finds that the tests of the electrical conditions give identical results in each, and the stimulating effects on the metabolism seem to be identical in each. The rarity of the air he believes to be a minor factor in the effect of altitude, which is mainly the result of the purity of the air, its constant motion and the abrupt changes from warmth to cold, all of which may be found at the seashore. The therapeutic indications for sea or mountain climate should be well weighed. Patients already overexcited or overstimulated in any way should not be sent to the mountains or seashore. They are indicated only for cases with reserve energy, not for those in which the store of energy has to be carefully guarded. Further research is needed to determine whether the sea climate may not have the same action on the composition of the blood which is noted in the mountains. He thinks it possible that the sea climate may share this property.

50. **Paranoia.**—Schultze regards the paranoiac as irresponsible, even in the comparatively early stages of his disease. He is no longer master of himself, but merely the unwilling victim of his morbidly altered feelings.

51. **Staphylococcus Sepsis.**—A workman, 38 years old, exhibited a clinical picture which simulated that of typhoid. This presumptive diagnosis was sustained by the fact that two of his mates presented symptoms of unmistakable typhoid at about the same time. Delirium developed the thirteenth day, but all attempts to cultivate bacteria from the blood were negative, although pneumococci were found in the sputa. The fifteenth day the parotid glands swelled, and puncture revealed pure cultures of staphylococci. A similar swelling developed at the right trochanter and another at the right elbow. Death followed two days later. The patient had fallen from a ladder four weeks before his illness, striking on the right side. Slight pains were noticed in the right sacral region and right leg, and becoming worse, a physician was consulted two weeks later. He ordered dry cupping, but the patient had the parts massaged instead. The pains increased thereafter, and the symptoms simulating typhoid fever developed. The resemblance of the clinical course to that of typhoid was explained by the lesions found in the intestinal lymphatic system at the necropsy. They were almost exactly like those encountered in typhoid. The traumatism had undoubtedly induced extravasation in the right gluteus maximus. Although the injury to the skin rapidly healed, it had allowed the entrance of staphylococci and an abscess formed, too deep to be discovered by palpation, and the massage of the parts evidently drove the infectious material into the circulation, resulting in rapidly fatal general infection. The temperature showed a wider daily range than is usual in typhoid.

54. **Prevention of Hay Fever.**—Mohr is an enthusiastic believer in Dunbar's pollen theory of hay fever. He has been a sufferer himself for many years, and was able to confirm in his own experience all of Dunbar's assertions in regard to the cause and antipollen treatment of hay fever. Mohr has gone further, and devised a protecting device with which he has successfully warded off the irritating pollen dust, both in himself and in all others who have used the device. It is a modification of the Schmidthuisen "nostril lifter" (Nasenflügelheber), but is completed by a filtering device. It is worn inside the nose, and causes no more discomfort than the wearing of spectacles. He thinks that it has solved the problem, not only of absolute protection against hay fever, but also for trades in which there is danger of inhalation of stone dust, etc. By wearing the device a few days the sensitiveness of the mucosa was so much reduced that he could go without it for a time without inducing the previously inevitable attack of hay fever.

56. **Surgery and the Medical Curriculum.**—Czerny urges the appointment of school inspectors for the high schools. The students should be examined at the beginning and close of each school year to determine the influence of the sedentary life, etc. He traces the development of surgery, and shows how the field has broadened so that the training is an ever-increasing task. In order to have the student's best efforts, his heart should be in his life work, and he should select that branch for which he has an affinity and not be guided by chance. With the present modes of education, there is little chance for the students to discover these affinities, as they are tied to their books. He would restrict the number of working hours in the high schools and colleges, and give the students more time for individual initiative. They would then be able to discover their true bent, and when they reach the medical college would know the line of work in which they were most likely to excel, and would approach it as artists, not as mere breadwinners. He remarks that the world has never seen such an amount of original thinking and artistic production as in the days of ancient Greece, when the school was essentially for the development of physical strength and beauty and the minds were allowed to develop untrammeled. He thinks that twenty-six to twenty-eight hours of study during the week is the maximum that should be allowed from the standpoint of hygiene.

59. **Ubiquity of Tubercle Bacilli and Disposition to Phthisis.**—[Flügge is director of the Institute of Hygiene at Breslau, and it is on his announcements of the danger of infection from the droplets disseminated in coughing and speaking that some of the most important prophylactic measures are based.] He now presents arguments to prove that the tubercle bacillus is by no means ubiquitous; that it is seldom found in the dust of the street or in houses, and relates experiments and tests by various investigators to support this view. Among the latest is Prausnitz' examination of the dust from certain railway cars used exclusively for transporting tuberculous subjects. In all his tests he found tubercle bacilli only twice, and then in the sweepings. The bacilli are found only in the close proximity of tuberculous subjects—recognized or unrecognized as such—and a large number of the germs are necessary for infection of others. One investigator found it impossible to infect guinea-pigs with 40 bacilli, but they invariably contracted the infection when twice or thrice this number was used. Paper cuspidors and handkerchiefs, that can be burned, are advisable for the use of consumptives. Scraps of sputum material are liable to cling to the fingers and to the clothing, especially around the entrances to the pockets. The fingers should be frequently and thoroughly

cleansed with soap and water, and the outer clothing brushed off once a month with 10 per 1,000 of bichlorid or taken to a formaldehyd disinfecting station. When the consumptive coughs he should go apart from other persons or turn his head away or hold a handkerchief before his mouth. The distance between heads in workshops should be at least one meter, thirty-nine inches, and wherever practicable, there should be partitions between employes engaged in sedentary work. In the bedroom a screen of smooth material in front of the bed is advisable if the consumptive can not have a room to himself. During the day the family should not crowd around him. During exacerbations it may be advisable to remove the consumptive to some sanitarium or convalescent home. Every child knows that phthisis is contagious, he remarks, but the measures by which the consumptive is perfectly able to protect others against infection from him are so simple and rational that their universal adoption is not an idle dream, while it would certainly be followed by a progressively diminishing number of cases of infection. He thinks that the necessity for sunny and well-ventilated dwellings is overestimated from this point of view. Sunlight will destroy the bacilli, but the consumptive is scarcely liable to spread his sputum out in a thin layer on the floor in the direct path of sunshine, and yet these are the conditions necessary for the destruction of the germs by sunlight. Particularly thorough ventilation is actually harmful as tending to disseminate the germs which otherwise are to be found only in the immediate vicinity of the subject. In regard to the predisposition to tuberculosis, he thinks our present knowledge is too limited to formulate any conclusions in regard to it. Behring's recent announcements concerning the danger of infection in the first weeks of life, summarized in THE JOURNAL, xli, page 994, are not accepted by Flügge, who points out that all children now, with the rarest exceptions, are either nursed or fed with boiled milk during early infancy. The danger from bacilli in butter is more patent, but by the time children are given butter they have outgrown the unprotected condition of early infancy on which Behring lays so much stress. Other arguments which Flügge advances against his theories are that the frequency of tuberculous infection increases with the age; that the mortality from phthisis is much greater among men than among women after the age of 20; the prevalence of phthisis among those employed in certain industries; the observations of phthisis unmistakably acquired late in life, and of cases among persons who were never fed on cow's milk during infancy; also the fact that in regions where infants are breast fed the number of cases of tuberculosis is not materially lower than in other regions where artificial feeding is almost universal. As a concluding argument, he refers to the prevalence of tuberculosis in countries where there are no cattle or where milk is not used as an article of food to any extent. Behring overlooks the fact that infantile gastro-intestinal disturbances following the use of milk are restricted to the three summer months and parallel the excessive heat. In countries in which the summers are cool they do not occur at all. During the nine other months of the year there is not the same difficulty in keeping the milk cool and in good condition. Physicians most experienced in children's diseases have never observed any injurious effects on normal children from milk briefly boiled. The German law forbids under penalty the addition of any chemical to milk, and to repeal this law in order to introduce Behring's method of formalinizing the milk seems unjustified at present. In regard to sterilization of butter, Flügge's research has shown that pasteurization of the cream would not interfere in any way with the production of butter, in case such a measure were deemed advisable.

60. **Active Immunization Against Tuberculosis.**—Friedmann's successful immunization of animals against tuberculosis has already been mentioned in these columns, page 136. He used for the purpose bacilli cultivated from the turtle, and thinks that these cultures combine all the requisites needed for successful immunization of mammals, as he enumerates in detail. He compares his technic and results with those published recently by Moeller in the *Zeit. f. Tub. und Heilstättenwesen*, V. 3. The latter used bacilli derived likewise from a cold-blooded animal, the blind-worm. The bacilli derived from this reptile, however, do not possess all the attributes which Friedmann regards as indispensable. Moeller experimented on himself, making three intravenous injections of living bacilli from the blind-worm cultures. After this preliminary treatment, he inoculated himself with 1/50 of a loop of human bacilli, but Friedmann does not regard these subsequent tests as conclusive, owing to the early death of the control guinea-pigs. [Friedmann's turtle experiments have attracted wide attention in other countries, although the German word for his culture—"Schildkrötentuberkelbazillenstamm"—has caused some amusement.—ED.]

62. **Podophyllin in Ankylostomiasis.**—Neumann reports experiences and experiments which have established that podophyllin has a specific action on the epithelium of the intestines which interferes with the parasites' clinging to it. They are thus easily dislodged by male fern after administration of podophyllin or the latter alone may be sufficient to dislodge and expel them. Its action is much more pronounced than that of calomel, while it is a much safer drug than the latter for this purpose.

Gazzetta degli Ospedali, Milan.

Last indexed page 568.

65 (XXV, No. 1.) Intossicazione idatica mortale per colpa di cisti del fegato e versamento nel peritoneo (rupture of hydatid cyst). A. Salomoni and La Spada (Messina).

66 Blood Count in Typhoid. A. Germanni.—Contributo alla diagnosi clinica della febbre tifoide.

67 Pain at Appendix Early Sign of Pneumonia in Children. A. Prandi.—Il dolore appendicolare nella polmonite del bambini.

68 L'ipermalvasione negli stenotici nasali. L. Rugani.

69 The Hand in Industrial Insurance. C. Mona.—Alcune considerazioni intorno alla mano nella legge degli infortuni sul lavoro.

Siglo Medico, Madrid.

Last indexed XL, page 67.

70 (Nos. 2556 to 2560.) Algo sobre pellagra en Espana. A. P. Saro.

71 (No. 2561.) *Lead Pipes for Drinking Water. E. Sanchez y Rubio.—Los tuberias de plomo metalico en la distribucion de las aguas potables.

71. **Lead Pipes and Drinking Water.**—Sanchez y Rubio asserts that the notion that water distributed through lead pipes is harmful is based on an unreasonable prejudice. In an address at the Egyptian Medical Congress he stated that a large part of the drinking water of Madrid is distributed by means of lead pipes, and yet tests conducted through two years have failed to disclose any traces of lead in the water drawn from them. No diseases nor affections have been known that could be attributed to lead poisoning.

British Medical Journal, London.

February 4.

72 The Progress of Surgery. Howard Marsh.

73 Work and Purpose of the Royal Army Medical College. William Taylor.

74 *Aseptic Surgery in Theory and Practice. Charles Barrett Lockwood.

75 *Some Practical Points Associated with Appendicitis. W. D. Spanton.

76 *Notes on an Ineffectual Treatment of Cancer; Being a Record of Three Cases Injected with Dr. Otto Schmidt's Serum. D'Arcy Power.

77 Acute Septic Colitis Due to Milk Poisoning. G. F. Vincent.

78 *Note on the Nature of the Parasitic Bodies Found in Tropical Splenomegaly. W. B. Leishman.

74. **Aseptic Surgery.**—The difficulties and inconsistencies of aseptic surgery as it is practiced are shown by Lockwood, who can not see how we are ever to dispense with chemical antisepsis. No condition or apparatus can ensure an absolutely aseptic atmosphere, but he thinks it irrational to make no attempt to rid the air of bacteria. The better the ideal the better the success. Different kinds of infection ought to be fought with different kinds of chemicals used in different ways. Experience has a great deal to teach in this respect. In hospital work each surgeon should have his own wards, theaters, instruments, nurses and assistants, and the septic and aseptic wards should be separate. More isolation wards are required. The present system of assistants necessarily increases the amount of sepsis, but he says there is some difficulty in saying which is best, a system which sends out into the world numbers

of men well educated as to the requirements of aseptic surgery or one which helps one surgeon to obtain the minimum percentage of suppuration. The answer, he thinks, is clear; the greatest good to the greatest number must prevail. Each unnecessary pair of hands should be eliminated. The surgeon should alone handle the ligatures, instruments, sutures and dressings. The single assistant has little to do, and his fingers ought to be kept out of the wound. A garrulous assistant is particularly bad. The instruments should be few and simple and the material uniform; a diversity of material multiplies the chances of infection.

75. **Appendicitis.**—Spanton reports a number of cases illustrating some of the difficulties of diagnosis. The more he sees of appendicitis the more he is convinced that it is safer to operate too soon than to delay too long. No time should be lost when the symptoms of general peritonitis appear. When the appendix can be safely removed, he always removes it, but in all instances free drainage may stave off imminent death when it is not possible to do more.

76. **Cancer.**—Power has tried Otto Schmidt's serum derived from a parasite cultivated from cancer growths, in the treatment of several cases of tumor with unsatisfactory results. He finds a reaction after the injection and an inflammation in the growths, but he can not satisfy himself that the serum acted by selection on malignant tissues only. It seemed only to intensify the pre-existing inflammation. It is painful, and the disease progresses, even to a fatal issue, while the injections are being given. He can say nothing specially favorable of the method either from a prophylactic, diagnostic or curative standpoint. Still further observations may be desirable as his tests of three cases were somewhat limited. One was not suffering from cancer, but from a non-malignant growth.

77. **Leishman-Donovan Bodies.**—Leishman points out the close resemblance of these bodies to some described by Dr J. H. Wright (*Jour. Med. Research*, December) from a case of tropical ulcer. Wright considered these parasitic, and proposed a new genus and species under the name of *Helcosoma tropicum*. Major Ronald Ross frequently has found in the pus of Delhi boils large numbers of a flagellated organism, the *Cercomonas hominis*. Leishman says that it is just possible that Wright's parasites may be altered cercomonads. The frequency of Delhi sores in India offers ample means for confirming Wright's observations. Leishman thinks that Laveran's view—that these parasites are a new species of *Piroplasma*—seems to be contraindicated.

The Lancet, London.

February 6.

79 *Physiologic Action and Antidotes of Snake Venoms with a Practical Method of Treatment of Snake Bites. Leonard Rogers.
80 Medical Examinations for Life Assurance. Dyce Duckworth.
81 The Midwives' Act in Its Bearing on the Work of General Practitioners. Percy Ross.
82 *Surgical Treatment of Perigastric Adhesions. E. Percy Paton.
83 Congenital Occlusion of the Esophagus. William Thomas.
84 Chart of Static Modalities. F. Howard Humphris.
85 Agglutination and Sedimentation in Human Glanders. C. Montague Heanley.
86 Case of Acute Lymphatic Leukemia. H. Savory.
87 Case of Ovarian "Fibroid" Tumor Removed by Posterior Colpotomy; Subsequent Pregnancy. John Phillips.

79. **Snake Venoms.**—Rogers has studied the various forms of snake venom, both colubrine and viperine types, and describes their respective actions and peculiarities. In the colubrine type the tendency seems to be to a paralysis of the respiration and end plates of the phrenic nerves, while the hemolysis is slight. The viperine venom produces a paralysis of the vasomotor center with marked hemolysis, as well as noncoagulation of the blood. One colubrine form—Bungarus fasciatus, the banded krait—has a viperine action on the vasomotor center, and this is emphasized by failure of Calmette's serum to counteract its effects. The most powerful poisons seem to be those of the sea snakes and cobras. In most all of these, with the one exception, Calmette's serum had effect. It should be used in every case of colubrine poisoning. He thinks a more generally powerful antitoxin can be prepared by using in this preparation a mixture of the different purely colubrine venoms. Artificial respiration may also be of use; one case is on record in which life apparently was saved by it. In viperine venoms, on the other hand, the Calmette serum has little or no effect. Rogers finds that 0.1 to 0.5 c.c. of a 1 in 1,000 solution of adrenal chlorid immediately sends up the blood pressure in cats after viper poisoning, but it is not entirely effective. He thinks that it, as well as nicotin, may have some value; the latter also stimulates the flagging respiratory center and restores the blood pressure. The venoms of vipers are much weaker than those of the colubrine species, and this is in favor of the remedies. In conclusion, he recommends destroying all snake venoms at the point of inoculation by permanganate of potash. Of course, this will not be effective if the venom is allowed to circulate, which it does with great rapidity, but the use of a ligature around the part greatly increases its efficacy. He advises the use of pure crystals of the permanganate of potash rubbed well into the wound. At the suggestion of Sir Lauder Brunton, an instrument has been made consisting of a lancet covered with a sheath, with a receptacle at its base, in which permanganate crystals are kept. This instrument can be carried in the waistcoat pocket for instant use, and can be sold at a very low figure. He thinks his results warrant the use of this method in practice, especially as it affects the venom of all snakes.

82. **Gastric Adhesions.**—In 5 per cent. of postmortems, according to the records, evidence of present or ancient gastric ulcer is found. In 40 per cent. of such cases, according to Fenwick, there are adhesions. If careful examination is made, Paton estimates that adhesions will be found in the gastric region in about 2 per cent. of all postmortems. These may be due to stomach ulcer, gallstones, trauma, pancreatic disease, tubercle, syphilis, etc., but the only common causes are gastric and duodenal ulcer or disease of the bile passages. In 123 cases, Fenwick found adhesions to the pancreas, liver, or to both in 92, in the remaining 31 cases the stomach was attached to the colon, mesentery, liver or spleen, or to three or more organs. Adhesions to the anterior wall seem to have been absent. The situation is of importance, as the usual attachment is to one or more mobile organs which are liable to be dragged on. The adhesion may be close, broad or long and slender. A very unusual variety is that which occasionally occurs to the anterior abdominal wall, forming with the infiltrated stomach wall and the thickened abdominal parietes a tumor, which may be easily mistaken for a new growth. Such cases of plastic perigastritis have been recorded by Billroth, Mikulicz and Mayo Robson. Such extensive adhesions may have been caused by local gastric perforation. The effect of these adhesions may be to distort or constrict the stomach or to interfere with its motility and contraction, as well as to involve other organs like the gall bladder, causing jaundice, etc. Pain and tenderness are the principal symptoms. Physical examination as a rule reveals nothing beyond tenderness, and there may be an increase in the size of the stomach. The appearance of the tumor may suggest malignancy, but the long continuance of the illness without serious interference with the general health will be against this. Exertion seems to bring on pain and change of position may relieve it. The ingestion of food may have no effect whatever. Paton reports many cases. He recommends verifying the diagnosis by exploratory incision; this should be recommended to patients after a fair trial of dietetic, medicinal and general hygienic measures has failed. If adhesions are found, they should be separated or divided. To prevent adhesions reforming, he believes aseptic methods best, but no antiseptics should be used within the abdominal cavity. If any fluid is used, it should be sterile saline solution. Vogel has found that greater freedom of movement than is usual after abdominal operations is also useful in preventing adhesions, as well as mild laxatives and the use of atropin, salicylate, general massage, etc. In preventing peristalsis and where adhesions can not be separated, and it is certain that reformation would occur and the trouble seems due to interference with the stomach emptying itself, pyloroplasty

and gastrojejunostomy are valuable. The latter is usually the better.

Journal of Tropical Medicine, London.

February 1.

88 Appendicitis in the China Fleet. F. H. A. Clayton.
89 *Scarlet Fever in Natives of India. Wm. Robertson.
90 *Adrenalin Chlorid in Plague and Other Diseases. K. C. Bose.
91 Case of Spirillum Fever. Leopold G. Hill.

89. Scarlet Fever.—The immunity of natives of India to scarlet fever seems to be subject to some exceptions, as Robertson reports an epidemic of some thirty cases, with three deaths. He finds that the disease, as a rule, takes a milder course. It seems to spread with rapidity among the Indian children, and a larger proportion of adults take it than is usual in the white race. He thinks the skin of the Indian native does not permit of the profuse development of the toxins, hence grave forms of the affection do not occur. The fact that the native nasopharynx is healthier than that of the whites, as a rule, may account for a part of the resistance to the germ.

90. Adrenalin in Plague.—Bose reports 24 cases of plague, with 11 deaths, all treated by adrenalin in 1, 2 and even 3 drop doses internally each hour. He thinks there can be no doubt that adrenalin is a remedy safely to be tried in plague. He has treated over 60 cases by this method, and with results in no way unfavorable. In all stages of the disease it kept the pulse up well and brought down the temperature and seemed to relieve the maniacal delirium. Its tonic action on the heart is its best recommendation. No case in which this remedy was freely used died from interstitial hemorrhage. Its effect, however, on intestinal and pneumonic plague was not encouraging, for out of a good number of such cases, only 3 recovered. In bubonic plague, uncomplicated with lung and intestinal troubles, he thinks it is a sovereign remedy. He speaks highly of its value in typhoid, malarial spleen and in surgical practice.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE—MEMOIRS—REPORT ON MALARIA AT ISMAILIA AND SUEZ. By Ronald Ross, F.R.C.S., D.P.H., F.R.S., C.B. Paper. Pp. 24. Price, 36 cents. REPORT ON THE SANITARY CONDITIONS OF CAPE COAST TOWN, with Suggestion as to Improvement of Same. 1902. By Dr. M. Logan Taylor, M.R., Ch.B. Pp. 24. Price, 24 cents. SECOND PROGRESS REPORT OF THE CAMPAIGN AGAINST MOSQUITOES IN SIERRA LEONE. By M. Logan Taylor, M.B., of the Liverpool School of Tropical Medicine. 1902. Price, 36 cents. New York, London and Bombay: Longmans, Green & Co.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Issued Monthly. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-graduate Medical School. Volume II. General Surgery. Edited by John B. Murphy, M.D., Professor of Surgery, Northwestern University Medical School. November, 1903. Pp. 556. Price, $1.50. Chicago: Year Book Publishers.

INFANT FEEDING IN ITS RELATION TO HEALTH AND DISEASE. A Modern Book on All Methods of Feeding. For Students, Practitioners and Nurses. By Louis Fischer, M.D., Visiting Physician to the Willard Parker and Riverside Hospitals of New York City. Third Edition, Thoroughly Revised and Largely Rewritten. Containing 54 Illustrations, with 24 Charts and Tables, Mostly Original. Cloth. Pp. 357. Price, $1.50 net. Philadelphia: F. A. Davis.

WHAT SHALL WE EAT? The Food Question from the Standpoint of Health, Strength and Economy. Containing Numerous Tables, Showing the Constituent Elements of Over Three Hundred Food Products, and Their Relations, Cost and Nutritious Values, Time of Digestion, etc., Indicating Best Foods for All Classes and Conditions. By Alfred Andrews. Pp. 116. Price, 75 cents. New York: Health Culture Co.

A MANUAL OF MEDICINE. Edited by W. H. Allchin, M.D., Lond., F.R.C.P., F.R.S. Ed., Senior Physician and Lecturer on Clinical Medicine, Westminster Hospital. Vol. V. Diseases of the Digestive System and of the Liver, Diseases of the Peritoneum and of the Vessels of the Abdomen, Diseases of the Kidneys, Diseases of the Ductless Glands. Cloth. Pp. 687. Price, $2.00. New York: The Macmillan Co. 1904.

A HANDBOOK OF OPHTHALMIC SCIENCE AND PRACTICE. For Students and Practitioners. By Henry E. Juler, F.R.C.S., Ophthalmic Surgeon to St. Mary's Hospital. Third Edition, Revised and Enlarged. With 190 Illustrations and 29 Full-page Plates in Colors and Black. Cloth. Pp. 733. Price, $5.25 net. Philadelphia and New York: Lea Brothers & Co. 1904.

TRANSACTIONS OF THE NEW YORK ACADEMY OF MEDICINE, 1899-1901. Semi-centennial Celebration. Anniversary Discourses, Presidential Addresses, Memorial Addresses, Wesley M. Carpenter Lectures, List of Papers Read at the State Meetings of the Academy, Officers of the Academy and of the Sections. Paper, Pp. 471. Printed for the Academy. 1903.

HOWE'S HANDBOOK OF PARLIAMENTARY USAGE. Arranged for the Instant Use of Legislative and Mass Meetings, Clubs and Fraternal Orders, Teachers, Students, Workingmen, and All Who Desire to Conduct Themselves "Decently and in Order" in Public Assemblies. By Frank William Howe. Cloth. Pp. 54. Price, 50 cents postpaid. New York: Hinds and Noble.

BIOGRAPHIC CLINICS. Volume II. The Origin of the Ill Health of George Eliot, George Henry Lewes, Wagner, Parkman, Jane Welch Carlyle, Spencer, Whittier, Margaret Fuller Ossoli and Nietzsche. By George M. Gould, M.D., Editor of American Medicine. Cloth. Pp. 392. Price, $1.00. Philadelphia: P. Blakiston's Son & Co. 1904.

A MANUAL OF GENERAL OR EXPERIMENTAL PATHOLOGY, for Students and Practitioners. By Walter Sydney Lazarus-Barlow, B.A., B.C., M.D., F.R.C.P., Director of the Cancer Research Laboratories of the Middlesex Hospital. Second Edition. Cloth. Pp. 788. Price, $6.50 net. Philadelphia: P. Blakiston's Son & Co. 1904.

DEPARTMENT OF THE INTERIOR. Bureau of Government Laboratories. Serum Laboratory. Preliminary Report on the Study of Rinderpest of Cattle and Carabaos in the Philippine Islands. By James W. Jobling, M.D., Director of the Serum Laboratory. Paper. Pp. 22. Manila: Bureau of Public Printing. 1903.

DISEASES OF THE EYE. By L. Webster Fox, A.M., M.D., Professor of Ophthalmology in the Medico-Chirurgical College of Philadelphia. With Five Colored Plates and 296 Illustrations in the Text. Cloth. Pp. 584. Price $4.00. New York and London: D. Appleton & Co. 1904.

EIGHTH ANNUAL REPORT OF THE BOARD OF MANAGERS OF THE SPRINGFIELD STATE HOSPITAL of the State of Maryland, Sykesville, Md. To His Excellency, the Governor of Maryland. Oct. 1, 1903. Paper. Pp. 52. Baltimore: Sun Book and Job Printing Office. 1904.

RABIES, Its Place Among Germ Diseases and Its Origin in the Animal Kingdom. By David Sime, M.D. Cloth. Pp. 260. Price, 10/6 net. Cambridge: University Press. 1903. New York: The Macmillan Co.

MEMORIA de Los Trabajos Ejecutados por el CONSEJO SUPERIOR DE SALUBRIDAD DE EX. AND DE 1900. Paper. Pp. 184. Mexico: Imprenta del Gobierno en el Ex. 1902.

A CHART OF DISEASES OF THE LUNGS, PLEURAE, BRONCHI, TRACHEA AND LARYNX. Paper. Published by the McArthur Hypophosphite Co., Ansonia, Conn.

REPORT OF THE TRUSTEES OF BELLEVUE AND ALLIED HOSPITALS for Quarter Ending Sept. 30, 1903. Paper. Pp. 22. New York: Mail and Express Co. 1903.

THE IDEAL CITY. By Cosimo Noto, M.D. Cloth. Pp. 377. New York: New York Labor News Company. 1903.

MEDICAL AND SURGICAL REPORT OF ST. LUKE'S HOSPITAL, Year Ending Sept. 30, 1903. Paper. Pp. 104.

New Patents.

Patents of Jan. 19 to Feb. 9 of interest to physicians:

750237. Iris-diaphragm. Edward Bausch and G. Hommel, Rochester, N. Y.
750611. Surgical retainer. Augustus C. Bernays, St. Louis.
750644. Casein compound and producing same. Hezekiah K. Brooks, Bellows Falls, Vt.
749813. Portable *a*-ray apparatus. Eugene W. Caldwell, New York.
750099. Ophthalmoscope. Henry L. De Zeng, Philadelphia, and P. S. Reid, Hammonton, N. J.
750103. Bedpan. Anton C. Eggers, New York.
750104. Throat bag. Anton C. Eggers, New York.
749963. Apparatus for applying disinfectants to water closets. George S. Gallagher, New York.
749728. Water purifying apparatus. John C. W. Groth, Pittsburg, Pa.
749731. Stretcher stand. Harry C. Hall, Telluride, Colo.
749834. Rupture tube. Bertram K. Hollister, Chicago.
749874. Coin-controlled atomizer. Wm. C. Meyer, St. Louis.
750568. Massage implement. James Barker, Philadelphia.
750621. Atomizer. Forrest V. Brayer, Blooming Valley, Pa.
750584. Administering electrical vibrations. Fred H. Brown, Los Angeles, Cal.
750847. Apparatus for disinfecting paper money. Charles B. Clark, Buffalo.
750260. Atomizer. Frank B. Comins, Sharon, Mass.
750625. Ear-drum protector. James A. R. Elliott, Kansas City, Mo.
750276. Vaginal syringe. Francis J. Gruss, San Francisco.
750465. Surgical instrument case. Frederick A. Koch, New York.
750297. Nasal douche. Fred W. Moffitt, Chicago.
750711. Optical device. Michael F. Shea, Newport, R. I.
750735. Implement for mechanical vibratory treatment. Fenton B. Turck, Chicago.
750515. Paraffin-bath for microscopists. Frederick A. Wunderlich, New York.
751286. Pocket spittoon. Joseph M. A. Deydier, Lyons, France.
750832. Preparing food casein. Andrew A. Dunham, New York.
751167. Surgical chair. Aaron P. Gould, Canton, Ohio.
750983. Abdominal belt. Arthur B. Kendrick, Philadelphia.
750878. Vaginal syringe. Orville P. Moon, Lorain, Ohio.
751415. Nipple shield. Frank P. Prindle, Stamford, Conn.
751031. Massaging implement. Julius B. Wantz, Chicago.
751475. Speculum. Thomas De Vilbiss, Toledo, Ohio.
751513. Surgical instrument. Lyman C. Holbrook, Charlotte, Mich.
751942. Crutch. John A. Ranno, Sumter, S. C.
751886. Apparatus for sterilizing water. Henry J. Wessels, Paris, France.

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